Indiana Business Review

Outlook 2008

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Providing insight and analysis on Indiana's economic and demographic issues since 1926

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The Big Picture

Indiana Metro Areas

Outlook for 2008

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For 35 years, a group of Indiana University faculty has gathered at the Kelley School of Business each fall to consider the economic outlook for the coming year. In the process, they forecast the prospects in terms of global, national, state, metropolitan, and agriculture perspectives, and they also assess the outlooks for the financial and housing markets.

This year's discussion began with a review of the latest forecast based on the econometric model of the United States developed by Indiana University's Center for Econometric Model Research (CEMR). The researchers then made adjustments to the model's predictions to accommodate expectations about key underlying variables. The CEMR model of Indiana's economy similarly provided a basis for projecting the outlook for the state.

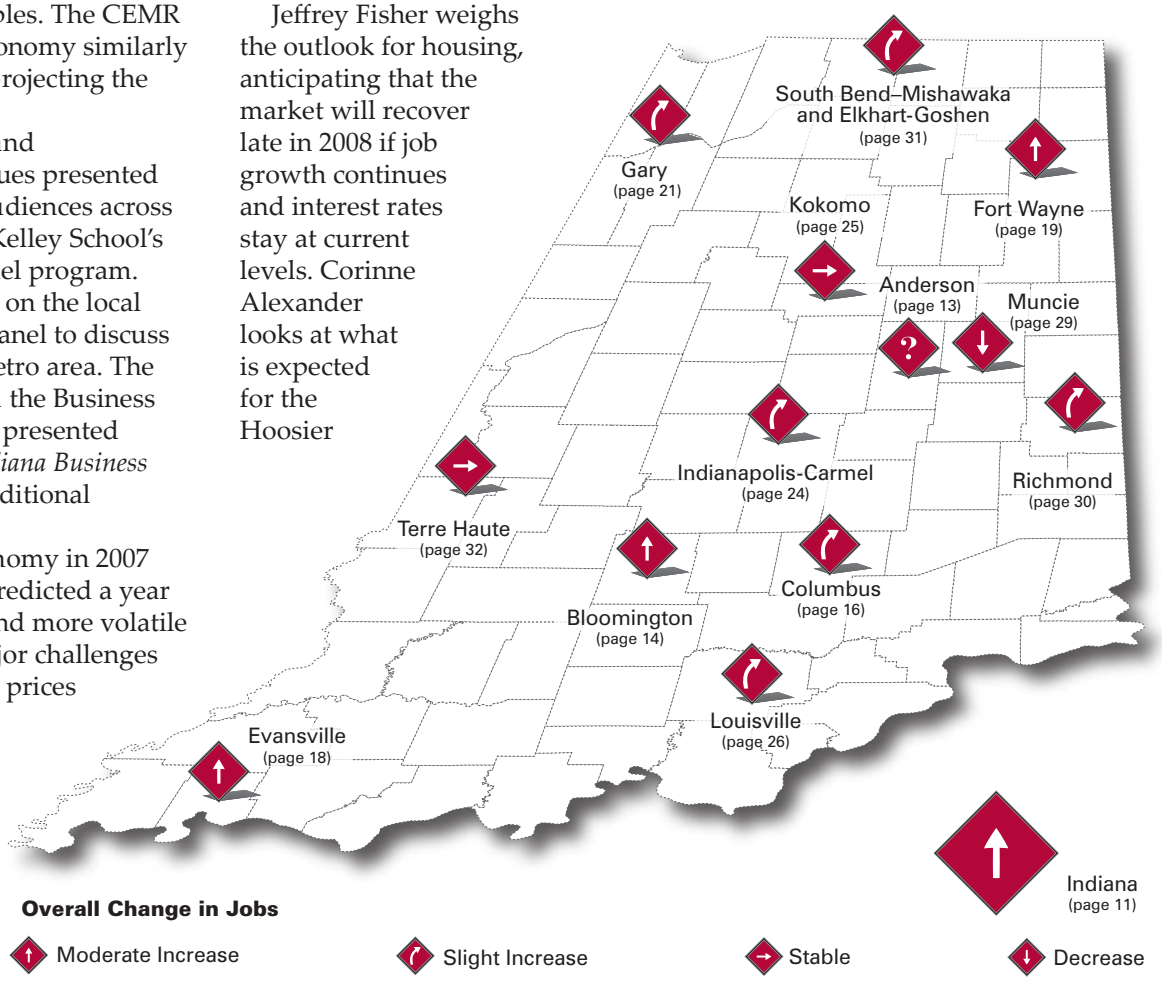
These economists and distinguished colleagues presented their predictions to audiences across Indiana through the Kelley School's Business Outlook Panel program. In each city, an expert on the local economy joined the panel to discuss the outlook for the metro area. The 2008 predictions of all the Business Outlook panelists are presented in this issue of the *Indiana Business Review*, along with additional supporting detail.

In general, the economy in 2007 moved as the panel predicted a year ago, but at a slower and more volatile pace as a result of major challenges posed by high energy prices and troubles in the housing and credit markets. The year ahead is marked by similar, significant risks, but the panel still expects the national economy to grow moderately in 2008.

The 2008 outlook issue of the *Indiana Business Review* begins with Ellie Mafi-Kreft's assessment of the international outlook, predicting that growth will remain strong throughout much of the world. Bill Witte comments on the U.S. economy, which he believes is in survival mode. Although the household sector will face pressure across the nation, there are enough positive signs to suggest sustained moderate economic growth. For the financial markets, John Boquist projects that interest rates will drop, corporate profits will rise slowly, and the stock market will continue to make gains.

Jeffrey Fisher weighs the outlook for housing, anticipating that the market will recover late in 2008 if job growth continues and interest rates stay at current levels. Corinne Alexander looks at what is expected for the Hoosier agriculture sector, predicting the best financial times for the sector since the 1970s. The forecast for Indiana's economy, presented by Jerry Conover, calls for continued modest growth if the larger economy does not experience a major upheaval. Finally, a group of economists and business leaders from around the state share their insights into what 2008 holds in store for most of Indiana's metropolitan areas (see **Figure 1**).

Figure 1
Projected Directional Change in Jobs, 2008



The International Economy

Elham Mafi-Kreft
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The economic growth around the world looks to remain strong in 2008 despite the "financial turmoil" that we have been experiencing in the United States and, to some extent, in Europe since this summer. The International Monetary Fund (IMF) anticipates world economic growth to reach 4.8 percent in 2008, continuing a remarkable six consecutive years of strong growth for all countries around the world. This significant growth is mostly due to the dynamic nature of the emerging economies, which are growing at 8 percent to 12 percent per year. For the first time, China is the largest contributor to the world growth figures, and combined, China, India, and Russia represent more than half of global growth. However, it is important to emphasize the potential risks to this positive outlook on growth: (1) oil prices are high; (2) there are still some residual financial problems and we are uncertain when, or how, they will occur; and (3) there is risk associated with inflation, particularly in the emerging economies (see **Table 1**).

Europe

After five consecutive quarters of vigorous growth, the economic performance in the Euro area is projected at 2.5 percent for 2007 and an even lower 2.1 percent for 2008. The European Union growth is predicted to be 3 percent in 2007 and 2.5 percent in 2008. This expected deceleration of growth can be explained by the tightening of global credit conditions, the tighter availability of bank credit due to the U.S. housing difficulties, and high commodity prices—particularly high oil prices.

Ongoing unrest in global financial markets has increased the risk associated with the short-term outlook since this summer. Many European banks are exposed to the U.S. mortgage market, causing a crisis of confidence throughout European interbank markets. (The European Central Bank and the Bank of England have been required to safeguard these markets, but with market participants unable to identify their exposure to losses, there has been a generalized loss of investor confidence in Europe.) The impact of the crisis on the real economy is still unfolding, and if the financial turmoil persists, the risks of a significant negative impact on business and consumer confidence cannot be ignored.

The Euro currency appears to be in line with Europe's sound economic fundamentals, but countries such as France, Portugal, and Spain, whose export prospects lack a sufficient cushion in competitiveness, will likely undergo economic weakening from the strength of the Euro currency. This weakening could undermine their confidence in the European Central Bank's "one-size-fits-all" policy as depreciation of the Euro currency becomes more and more tempting to short-sighted politicians.

Asia

The outlook for Asia is positive overall. Japan, the world's second largest economy, is continuing to perform well and is expected to

Table 1
International Economic Forecasts

Geographic Area	Percent Change in GDP		Inflation Rate*		Current Account** (Percent of GDP)	
	2007	2008	2007	2008	2007	2008
Emerging Asia***	9.2	8.3	4.9	4.2	6.6	6.5
Advanced Economies****	2.5	2.2	2.1	2	-1.3	-1.4
China	11.5	10.0	4.5	3.9	11.7	12.2
India	8.9	8.4	6.2	4.4	-2.1	-2.6
Africa	5.7	6.5	6.6	6.0	n/a	0.6
Russia	7.0	6.5	8.1	7.5	5.9	3.3
Venezuela	8.0	6.0	18.0	19.0	7.8	4.1
Argentina	7.5	5.5	9.5	12.6	0.9	0.4
South Korea	4.8	4.6	2.6	2.7	0.1	-0.4
Brazil	4.4	4.0	3.6	3.9	0.8	0.3
Taiwan	4.1	3.8	1.2	1.5	6.8	7.1
Mexico	2.9	3.0	3.9	4.2	-0.7	-1.1
United Kingdom	3.1	2.3	2.4	2.0	-3.5	-3.6
Canada	2.5	2.3	2.2	1.9	1.8	1.2
Euro Area	2.5	2.1	2.0	2.0	-0.2	-0.4
Germany	2.4	2.0	2.1	1.8	5.4	5.1
France	1.9	2.0	1.6	1.8	-1.6	-1.8
United States	1.9	1.9	2.7	2.3	-5.7	-5.5
Japan	2.0	1.7	n/a	0.5	4.5	4.3
Italy	1.7	1.3	1.9	1.9	-2.3	-2.2

*Consumer Price Index
**The IMF definition of current account is "the record of all transactions in the balance of payments covering the exports and imports of goods and services, payments of income, and current transfers between residents of a country and nonresidents."
***Emerging Asia includes developing Asia, the newly industrialized Asian economies, and Mongolia.
****Advanced Economies include the United States, the Euro area, Japan, United Kingdom, Canada, Korea, Australia, Taiwan Province of China, Sweden, Switzerland, Hong-Kong, Denmark, Norway, Israel, Singapore, New Zealand, Cyprus, and Iceland.
Source: IMF World Economic Outlook

grow at 2 percent in 2007 and 1.7 percent in 2008. Last year, consumer prices started rising—a welcomed development following seven years of deflation that crippled economic growth. However, mild deflation made its reappearance this year, and the slowdown in the U.S. housing market is creating a negative risk to Japan's economic growth, making it inadvisable for the Bank of Japan to increase interest rates and strengthen the yen.

China is still doing exceptionally well and is projected to grow at 11.5 percent in 2007 and 10 percent in 2008. Due to its export-oriented economy, China can be affected by an economic slowdown in its key markets. The effect of a potential global slowdown on Chinese growth could actually be welcomed by policymakers who are concerned about the overall rapid growth, risk of high inflation, and excessive trade surplus of the Chinese economy. Moreover, the Chinese trade surplus is causing international tensions and could lead to future macroeconomic concerns for China. The focus should continue to be placed on this external imbalance and an appreciation of the real exchange rate for the renminbi.

India's economic performance is very satisfactory and the country's economy is expected to grow at 8.4 percent next year.

If China and India are excluded, the other economies in developing Asia are expected to grow at a more modest, but still very strong, pace of 5.7 percent in 2007 and 5.6 percent in 2008. To date, the volatility in the global financial market has had a limited impact on the Asian emerging markets. However, in these export-led economies, the possibility for further global financial market turbulence constitutes a significant downside concern. Driven by the region's large current account surplus, the foreign exchange inflows have been very strong. Despite the initial successful management of those inflows in 2007, additional policy responses to slow down the surge in lending and investment growth will be needed to further boost their consumers' purchasing power and sustain growth while minimizing the chance of overheating their economies.

Russia

The Russian economy, showing its resilience despite the turbulence in the global credit market, is growing strongly at 7 percent in 2007 and 6.5 percent is forecasted for 2008. High oil prices are certainly helping, but credit should also be given to the economic policies that in 2007 delivered the lowest annual inflation rate since the breakup of the Soviet Union.

Latin America

Latin America is expected to see output growth of 5 percent in 2007 and 4.3 percent in 2008. Despite policy reforms in this region, the economic performance has been disappointing and remains well behind that of Asia. Furthermore, a downturn in the United States is likely to have a negative effect on overall exports from Latin America. In Mexico and Central America, where exports to the United States have been critical, the possibility of the U.S. economy cooling off will present a large problem for growth. If the slowdown occurs in the United States and spills over to China, it will result in declining commodity prices. Also, a deceleration in the export of commodities from South America could set back the recent growth of countries such as Argentina or Venezuela. More importantly, populism has been on the rise; therefore, it is pressing for several economies in the region to adopt policies that are more supportive of sustained long-term growth, as some countries in this region have been increasing the vulnerability of their economies to more shocks.

The Risks

The global economy is facing a period of uncertainty and a number of risks threaten to cool down the global economy in 2008. The turmoil in the financial markets has the potential to affect growth worldwide, not just in the United States. This effect could be moderate to quite substantial, and temporary to persistent. Regardless of its magnitude, weaker growth in the United States will have spillover effects on trade and weaken the economies of its trading partners. Moreover, in our globalized economy, many countries could be affected by the developments in the global financial system through financial contagion. The contagion caused by the U.S. subprime mortgage crisis, which resulted in a global credit crunch, has further exposed this danger.

Also, there are still global imbalances: twin U.S. budget and current account deficits and the accumulation of huge foreign currency reserves by Asian central banks remain. Over much of the past decade, the United States has failed to increase its savings rate or reduce imports. No serious efforts have been made to reduce the budget deficit and the United States remains dependent on foreign lenders—Asian central banks in particular. Such weaknesses not only threaten to hinder overall U.S. competitiveness, but they represent a risk to the global economy. On the other hand, in 2007 China began contributing to the solution by allowing its currency to appreciate against the dollar. This should relieve some of the pressure created by China's immense exporting growth, but more flexibility in the exchange rate is needed to reduce this large and unpredictable risk on the global economy.

It is clear that rising food and oil prices are secondary risks for the world economy as they will be further inflated by the disruption in the global financial market. Rising oil and food prices will have negative effects on consumption spending and continue to increase worries about inflation worldwide.

The U.S. Economy

Willard E. Witte
Associate Professor of Economics and Co-Director at the Center for Econometric Model Research, Indiana University Bloomington

During the past year, the U.S. economy has essentially been in survival mode. The good news as the year draws to a close is that we seem to have avoided intensive care. The not-so-good news is that the impediments to full recovery are not diminishing. Nevertheless, we expect the economy will avoid a crisis and continue to muddle through.

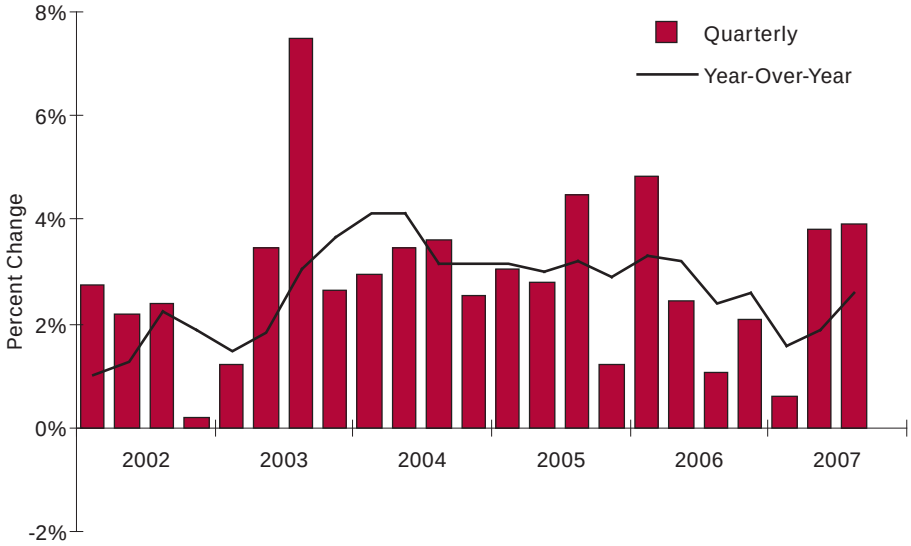
As shown in **Figure 1**, output growth in the United States decelerated for the fourth straight year during 2007. On a fourth-quarter to fourth-quarter basis, real gross domestic product (GDP) will probably grow by about 2.7 percent. By comparison, growth in 2003 reached 3.7 percent. The labor market shows a similar, but delayed, pattern (see **Figure 2**). During 2005, the economy was adding over 210,000 jobs each month. This slowed slightly to 190,000 per month in 2006, and has fallen to only 126,000 so far in 2007. Job growth for four of the past five months has been below 100,000. This latter level is insufficient to absorb new entrants into the labor market, causing the unemployment rate to rise from a low of 4.4 percent in March to 4.7 percent in October.

There are two basic pathogens causing this feeble performance. The more significant is the continuing collapse in the housing sector. Since peaking in late 2005, the decline has been dramatic. Housing starts, for example, have fallen by close to 50 percent. During the past summer, the situation seemed to be stabilizing, but turmoil in the mortgage market caused home sales to plummet during the fall. The weak sales environment has also become evident in housing prices, which are under pressure in most areas of the country.

The other source of negative pressure is the energy market. A year ago, oil prices were around $60 per barrel, and our expectation was that they would average about that level during 2007. Instead, there has been a steady increase, to above the $90 level as of late October.

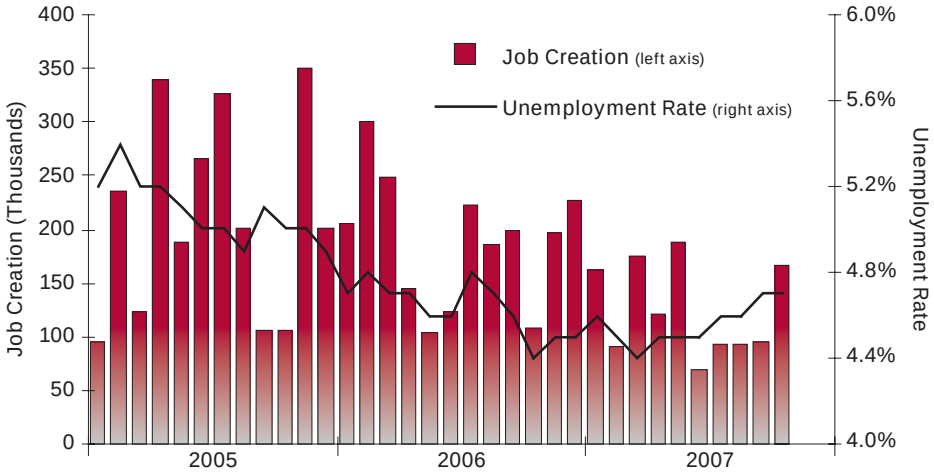
In the face of these inflictions, it is a little surprising that the economy has held up as well as it has. The housing sector has cut overall growth by close to 1 percent. A rough rule of thumb has been that a $10 increase in the oil price will cut growth about 0.5 percent. Assuming that the economy has a sustainable growth of a little over 3 percent, it would have been easy for growth this year to

Figure 1
U.S. Real Output



Note: Data are seasonally adjusted
Source: Bureau of Economic Analysis

Figure 2
U.S. Job Creation and Unemployment Rate



Note: Data are seasonally adjusted
Source: Bureau of Labor Statistics

have come in at a life support level around 1 percent. That the rate was more than 1 percent reflects several positive influences. First, the international trade picture improved. While this was partly due to a weak dollar, it is also driven by very good growth (the best ever, in fact) in the rest of the world. Second, business investment in structures and in high-tech equipment has been strong. Finally, consumption spending by households weakened, but did not collapse.

We expect a continuation of this basic pattern—solid trade numbers, adequate investment, and consumption at a level that is sufficient to maintain forward momentum in spite of continuing declines in the housing sector and pressure from energy prices. Some details:

- We expect output to grow about 2.5 percent in 2008. That will be slightly below 2007, and also below the long-run potential of the economy. Growth will be slower in the first half of the year, with some acceleration after mid-year.
- Employment will expand by about 1.1 million. Unemployment will rise early in the year, reaching perhaps 5 percent, and then will stabilize.
- Inflation will moderate from 2007, with assistance from relatively stable energy prices. The consumer price index will increase about 2.6 percent.
- The Federal Reserve, which lowered its target for the federal funds rate to 4.50 percent in September and October (from 5.25 percent), will cut the rate at least another 25 basis points.

This is a relatively optimistic scenario. It rests on some improvement from the 2007 experience in three areas.

1. We expect oil prices to moderate from their recent peak. Although the average for the year will at least match 2007, the upward trend will end.
2. The world economy will continue to be strong, allowing exports to be a solid support for the economy. Further depreciation of the dollar will contribute to this outcome.
3. While housing will continue to weaken, the extent of its drag will lessen as the year proceeds. More importantly, troubles in this sector will not lead to a major retrenchment in consumption.

For each of these three, a less favorable scenario can by no means be ruled out. Energy prices have a substantial speculative element, and the political situation in the Middle East continues to exhibit significant instability. A crisis in that area could easily drive prices into totally uncharted territory. This would be bad for both the domestic economy and the world economy as a whole. The extremely strong growth in East Asia probably cannot continue indefinitely in any case. Finally, the very weak demand in the housing market could have more impact on housing prices than we foresee. If so, there could be a severe impact on consumer confidence.

> *"The crucial household sector will face pressures from several directions, but will not collapse."*

We think that 2008 will be another year in successful survival mode. The crucial household sector will face pressures from several directions, but will not collapse. While there are definitely risks, there are enough positive signs to sustain moderate economic growth.

John A. Boquist
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The financial markets performed quite well for the first half of 2007, with the Dow Jones Index crossing the 14,000 threshold on July 19. Then the subprime mortgage mess hit, reminding all investors that investments are indeed risky and must be priced accordingly. This marked the end of a big party in real estate—one that was reflected in popular "flip this house" TV shows and incredible speculation by amateur real estate investors who did not have the resources to weather a downturn in the market. It all seemed so easy: put a small pre-construction down payment on a property in a new development, wait for the price of the yet-to-be-built property to soar, wait again until the property is complete with yet another price increase, and, finally, sell to another "investor" for a sizable gain without ever occupying the real estate. It became clear to all: a house was no longer a home … it became a financial asset with windows!

All of the real estate market participants had to come together to make this possible: lenders, buyers, real estate agents, and investors. Lenders supplied low interest rate financing to the developers to get the projects underway and then provided generous credits to low-quality buyers. Little or no loan documentation was required from these buyers to qualify for a substantial adjustable rate mortgage with an unrealistically low initial payment stream. Real estate agents guided homebuyers and speculators through the process with visions of ever-increasing fees. Foreign and domestic investors displayed a voracious appetite to purchase the subprime mortgages that lenders, with help from their friends on Wall

Street, repackaged into collateralized debt obligations (CDOs) with varying slices, or tranches, of risk/return characteristics that catered to the investors' portfolio needs. The credit agencies complied by assigning the highest rating possible to the CDOs to assuage the investors' fears of default. Once the CDOs were sold, the lenders had the cash to start the process anew and years of frenzied growth ensued. However, as the dates for resetting the payments for the underlying adjustable rate mortgages were reached, payments dramatically increased. Such increases were required to cover the initially low teaser payments and to reflect the interest rate increases orchestrated by the Federal Reserve to cool the economy and fight inflation.

As the growth in housing prices stalled, new financing on the property could not be arranged to bail out the borrower. Borrowers had no recourse except to try to sell the property at distressed prices or walk away if the amount owed was greater than the property was worth. If foreclosed, the mortgaged property was auctioned off, further depressing real estate prices. In the end, interest rates spiked up (especially for lower credit quality loans); real estate prices fell as speculative fever waned; realistic expectations of risk/return tradeoffs returned to the market as the prices of existing CDOs collapsed and the market for new CDOs disappeared; and residential construction slowed to a crawl in many parts of the country.

In addition to this subprime mortgage mess, investors are also concerned about oil price uncertainty, the continuing wars in the Middle East, and political gridlock in Washington. With this backdrop, the markets are re-pricing risk and reassessing the future.

Interest Rates

When faced with his first financial crisis caused by the subprime mortgage debacle, Federal Reserve Chairman Bernanke acted on August 17 to cut the discount rate charged to bank borrowers by a substantial 50 basis points. Previously, the Federal Reserve injected $43 billion of liquidity into the system, the European Central Bank $191 billion, and the Bank of Japan $8.4 billion. These coordinated efforts were meant to establish liquidity in the market, stabilize exchange rates, and calm credit markets. Although they did restore a measure of confidence to the markets, the London Interbank Offered Rate (LIBOR) rose to its highest level in seven years, indicating that the markets were still unsettled. On September 18, the Fed also cut the federal funds rate by 50 basis points to 4.75 percent. On October 31, the Fed celebrated Halloween by lowering both the federal funds rate and the discount rate by another 25 basis points.

We expect the Fed to continue with this calming influence and reduce the federal funds rate to 4.25 percent by the end of 2008. Evidently the Fed no longer sees its main job as fighting inflationary pressures but rather one of maintaining calm in the markets. We expect the budget and trade deficits to continue and the value of the U.S. dollar to slide even more. A key question in this scenario is whether foreign investors will continue to purchase the massive amounts of government bonds as they have in the past. In particular, China and Japan have supported U.S. trade by propping up the dollar from even greater declines with substantial debt buying. If this buying dries up, the dollar could fall precariously.

We expect that short-term rates will be lower than long-term rates for the year. Thus, the yield curve will remain at its normal upward sloping shape. Our forecasted inflation of 2.6 percent for the upcoming year implies that short-term real rates of interest will be below 2 percent, which is at the lower end of historical norms. The decrease in inflation we are projecting suggests that ten-year Treasury yields will remain near the current 4.6 percent level, perhaps inching up to the 5 percent range by the end of 2008. However, we expect the prime rate to remain stable at a level of 7.5 percent, and we anticipate fixed thirty-year mortgage interest rates to remain in the current 6.1 percent to 6.2 percent range. Clearly, as lenders demand a premium for credit risk, rates for low-quality loans will be higher—perhaps a level of 6.7 percent by the end of the year. Very risky subprime borrowers will likely be unable to get credit.

Corporate Profits

Rising costs of inputs took their toll on corporate profits last year. Such inputs included materials, energy, and labor, plus the continually increasing health costs and fringe benefits. Profits rose only 7 percent in 2007, the lowest growth rate since 2001. **Figure 1** shows the most recent data for corporate profits. We forecast a similar performance for next year with corporate profits growing in the 6 percent to 8 percent range. Although productivity growth will increase to a level of 2.2 percent next year, this growth will not be enough to offset the rising costs, particularly energy costs. Global competition

> *"A subprime loan is a loan made to someone who does not qualify for a more favorable rate because of low credit scores. These loans have higher interest rates and fees than prime loans."*
>
> *—For a more detailed explanation, see the housing article on page 8*

remains fierce in virtually all markets, but a continued weak dollar will help exporters remain competitive and will produce some trade gains. Real gross domestic product (GDP) growth of 2.5 percent suggests a steady business climate for next year.

The U.S. automakers have been renegotiating their contracts with the UAW and progress has been made in controlling labor and health care costs for the domestic companies. This will marginally help their competitive positions in the long run. It is important to note, however, that Toyota has overtaken Ford as number two in the U.S. auto market and is quickly gaining on General Motors.

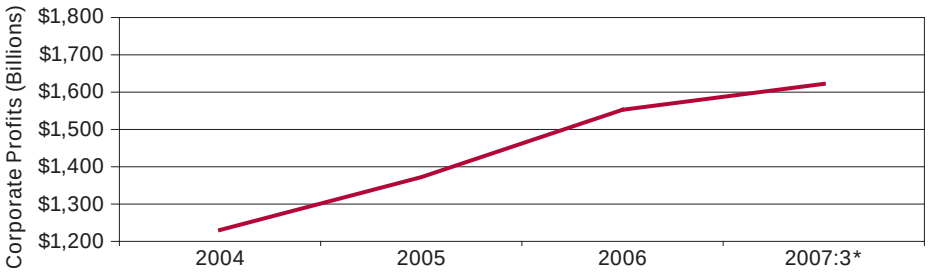
Of all the sectors, the financial sector will be reporting the weakest profits in the coming months as it writes off the losses from its subprime activities. Large commercial and investment banks, as well as some hedge funds, will be particularly hard hit. For example, Merrill Lynch just wrote off $8.4 billion, a bigger-than-expected write-down on the values of its subprime mortgages and collateralized debt obligations. Barclays and Citicorp have also written off over $10 billion each.

Corporate balance sheets remain strong with plenty of cash and borrowing power available to fund needed capital investments. Merger and acquisition activity will slow from its torrid pace last year as the private equity firms absorb the deals they have consummated and as they re-price the risks inherent in their strategies. Dividends and share repurchases are expected to increase as companies share their success with investors.

Stock Markets

After hitting its high in July, the Dow dropped below 13,000 on August 15 and the S&P 500 crossed into negative territory year-to-date. Similar drops occurred in virtually every market in the world, with Brazil and Korea being particularly hard hit. Large daily drops became common: for example, the Korean market dropped about 7 percent in one day. The largest daily drop by the S&P 500 was 50 points on February 27, as a result of the growing subprime crisis.

Figure 1
Corporate Profits



*Data for the third quarter of 2007 are preliminary and seasonally adjusted at annual rates
Source: Bureau of Economic Analysis

Overall, the stock market through September was up for 2007 with the Dow Jones Industrials up 12.7 percent and the broader S&P 500 Index up almost 10 percent. The period was especially good for small stocks, with the NASDAQ up 14.7 percent. Thus, the subprime mess was only a temporary setback for the markets.

The steady economic growth we envision suggests the stock market will continue to make gains in 2008. While steady growth will continue, some sectors will do better than others. For example, gold speculators are returning to the financial markets, with the price of gold reaching $800 per ounce on October 31. This is the highest gold has been since the high inflation year of 1980. However, the big run-up in energy stocks is likely over, banks and other financials will be hurt by the subprime mess, and the consumer goods sector depends on the consumer confidence and the strength of the Christmas selling season. Additionally, on August 14, Wal-Mart (considered a barometer of the health of the U.S. retail sector) reported lower-than-expected second quarter profits and cut its projected full-year earning forecast. Wal-Mart plans to discount heavily in the months ahead, which would cause further damage to margins.

Increased dividends and stock buybacks will provide support for the market. In the long run, we continue to expect the stock market to offer returns of 6 percent to 8 percent above treasury bonds, which is in line with the market's historical average performance since 1926. As always, prudent investors should continue to diversify their portfolios to guard against too much risk exposure to any individual stock, market, or asset category. It may not be exciting, but one can sleep well at night by avoiding major losses, especially as the market continues to re-price risk.

Summary

We predict that the economy and financial markets will exhibit growth in 2008. The results will be choppy over time but investors will be appropriately rewarded for the risks inherent in their investments. The good news for investors is that the markets are re-pricing the risks in line with historical experience. The bad news is that some investors will always be tempted to reach for return and pay too much to speculate. We've seen it all before: tulip mania in Holland in the seventeenth century, the South Sea bubble in 1720, the roaring twenties, the Japanese bubble economy of the late eighties, the Internet bubble in the nineties, and now subprime mortgages. The lesson is clear—don't be tempted to speculate with your hard-earned dollars.

Housing

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The housing slump that started in 2006 continued to worsen in 2007 as the term "subprime mortgage" entered many people's vocabulary for the first time. A subprime loan is a loan made to someone who does not qualify for a more favorable rate because of low credit scores. These loans have higher interest rates and fees than prime loans and are often issued by mortgage brokers who are not regulated. During the boom in home prices in 2004 and 2005, lenders became increasingly aggressive in making subprime loans and often required little if any documentation of the borrower's income. Of all the mortgage loans made in 2005, 29 percent were subprime loans, up 88 percent from 2004. The loans were often given, at close to 100 percent of the home's value, to borrowers who were stretched to make the monthly payments. As long as home prices were rising, borrowers could refinance the home and take out cash to help cover their mortgage payments. An increasing proportion of the subprime loans issued in recent years were adjustable rate mortgages (ARMs). These loans had an initial "teaser" rate (also called "exploding ARMs")—meaning the rate was artificially low during the initial term of the mortgage but would reset to a higher interest rate even if mortgage interest rates stayed the same.

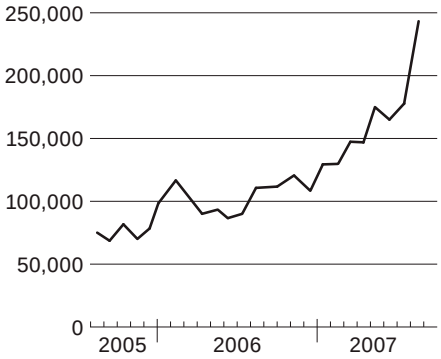
During 2007, when the rate on these ARMs was due to reset, interest rates had risen. So the interest rate on the loans increased due to both rising mortgage rates and because the initial interest rate was a teaser rate. This resulted in borrowers facing payment shock when their mortgage payments were increased substantially and they could no longer afford the payments. Furthermore, because home prices were no longer appreciating, borrowers could not refinance to help cover their costs. What took credit markets by surprise was the number of borrowers who were caught in this situation and defaulted on their loans. Clouding the outlook is the fact that approximately 2.5 million loans are still set to adjust upward in 2008; thus, the number of foreclosures in 2008 is likely to be very high.

According to RealtyTrac, a company that tracks foreclosures, the number of foreclosures in 2007 will double those in 2006. This pace of foreclosures could continue into 2008 unless lower interest rates help to mitigate the problem (see **Figure 1**). The foreclosure rate is expected to be 21 percent for loans originated during 2006—when lending standards tended to be the most lax.

As loans are foreclosed and the properties are put on the market, the supply of homes for sale increases, putting even more downward pressure on home prices. This results in even more borrowers having negative equity in their home and no incentive to keep making mortgage payments. The results can be especially devastating in neighborhoods with a high percentage of lower income borrowers who could only qualify for subprime mortgages.

Because many of the subprime mortgages were packaged into securities that were purchased through hedge funds and other vehicles by investors around the world, the impact of the losses due to foreclosures on the subprime mortgages has turned out to be much more extensive than anyone imagined. Over $1.8 trillion of securities backed by subprime mortgages were created since the year 2000. The news media have been filled with stories of huge losses by hedge funds that had invested in securities backed by subprime mortgages. Furthermore, as the risks of these securities became more apparent, lenders tightened up their lending requirements. These requirements made it even more difficult to obtain financing—not only for subprime loans but for prime mortgage loans and loans on commercial real estate. The concern about the risk of subprime mortgages spilled over to impact the entire credit market.

Figure 1
Total Foreclosures per Month Nationwide



Source: RealtyTrac

Spreads remain abnormally wide between risk-free Treasury bills and asset-backed commercial paper, considered riskier because the assets backing this short-term debt issued by financial institutions may include subprime residential mortgages (see **Figure 2**). Commercial property sales are closing, but many deals are being delayed, renegotiated, or cancelled. Prices have dropped for most property types, with riskier assets in secondary markets bearing the brunt of the increase.

Undoubtedly, the mortgage market meltdown has had a major impact on the housing market over the past year. However, the question remains as to how strongly the meltdown's effects will be felt as we head into 2008 and beyond. According to Fed

Chairman Ben Bernanke, the housing downturn has not yet hit bottom, and many economists predict we will not begin to see recovery until the fourth quarter of 2008 or later, depending on the restoration of the credit markets.

As a result of stricter mortgage standards, housing starts will continue to decrease. Total housing starts in the third quarter of 2007 were 22.6 percent lower than in the same quarter a year ago. Starts are projected to be in the range of about 1.2 million units during 2008, down from 1.4 million units during 2007 and 1.8 million units in 2006. Single-family starts during 2008 are expected to show a 50 percent decline from their peak in the first quarter of 2006.

In the third quarter of 2007, existing home prices were down 1.3 percent from a year earlier and new home prices were down 0.9 percent. This is the first year ever that home prices declined on a national basis. The median home price for an existing home dropped to $221,000 in the third quarter of 2007 from $225,000 in the third quarter of 2006. In areas hit by high foreclosure rates in the coming months, the increased supply of repossessed homes will lead to even lower prices. The National Association of Realtors estimates that existing home prices in the fourth quarter of 2007 will be down 2.5 percent from a year ago and new home sales will be down 3.3 percent. In the first quarter of 2008, existing home prices are predicted to be 0.6 percent below year-ago levels with new home prices down 1.5 percent.

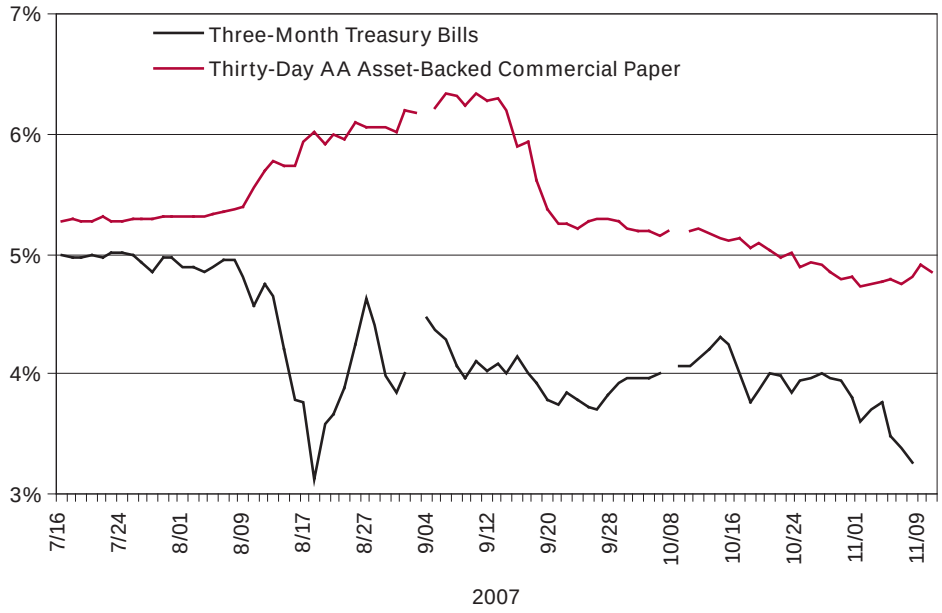
The demand for rental units has been increasing as more people are unable to qualify for financing due to stricter credit standards, or are being forced out of their homes due to foreclosure. This trend will continue as the subprime mortgage crisis plays out—at least into the third quarter of 2008. Many condominiums are now being converted back into rental units at rates not seen since the 1980s, and builders are building more new rental units than condo developments.

The Fed's recent rate cut brought some relief by decreasing the rate for a thirty-year fixed mortgage from 6.5 percent in the third quarter to around 6.4 percent in the fourth quarter of 2007. However, rates are forecast to increase slightly by the third quarter of 2008 to 6.6 percent and then flatten out. Adjustable rate mortgages are in the 5.7 percent range for a one-year adjustable rate—the same as one year ago—and this rate is likely to continue.

The recovery of the housing market over the next year is going to depend partly on how the credit markets adjust. Many lenders are now more willing to renegotiate loans for those facing foreclosure. In some areas, homes can't be sold for more than the balance due on the mortgage because of the large supply of homes and the inflated prices at the time of purchase. Further foreclosures will be the main culprit in prolonging the housing market crisis and anything that can be done to lessen the number of foreclosures is likely to speed up recovery. However, the credit market can only do so much. As Ben Bernanke has warned, loosening standards or lowering rates on new loans is not the way to spur recovery and could lead to riskier investments and future crises.

Despite the current subprime mortgage problem and the impact it has had on housing markets, many economists are hopeful that the market will recover late in 2008—as long as job growth continues in the economy and inflation stays under control so that interest rates can stay at current levels. The inventory of new homes for sale has been dropping as builders have cut back on the pace of housing starts and aggressively stepped up sales incentives. This should ultimately help provide some stability to the housing market. ■

Figure 2
Three-Month Treasury Bills and Thirty-Day AA Asset-Backed Commercial Paper



Note: Data were not available for three-month treasury bills for September 3, October 8, and November 12. Data for thirty-day AA asset-backed commercial paper were not available for September 4 and October 9.
Source: IBRC, using Federal Reserve Board data

Indiana Agriculture

Corinne Alexander
Assistant Professor, Department of Agricultural Economics, Purdue University, West Lafayette

Indiana agriculture is going to enjoy the best financial times since the 1970s but will experience more uncertainty in 2008. The excitement of 2007—with the rapid growth of the biofuels sector, strong export demand, and record wheat prices due to very tight worldwide wheat supplies—is expected to continue in 2008. Going forward, the combination of growth in biofuels and strong export demand means high Indiana farm incomes and increasing farmland values.

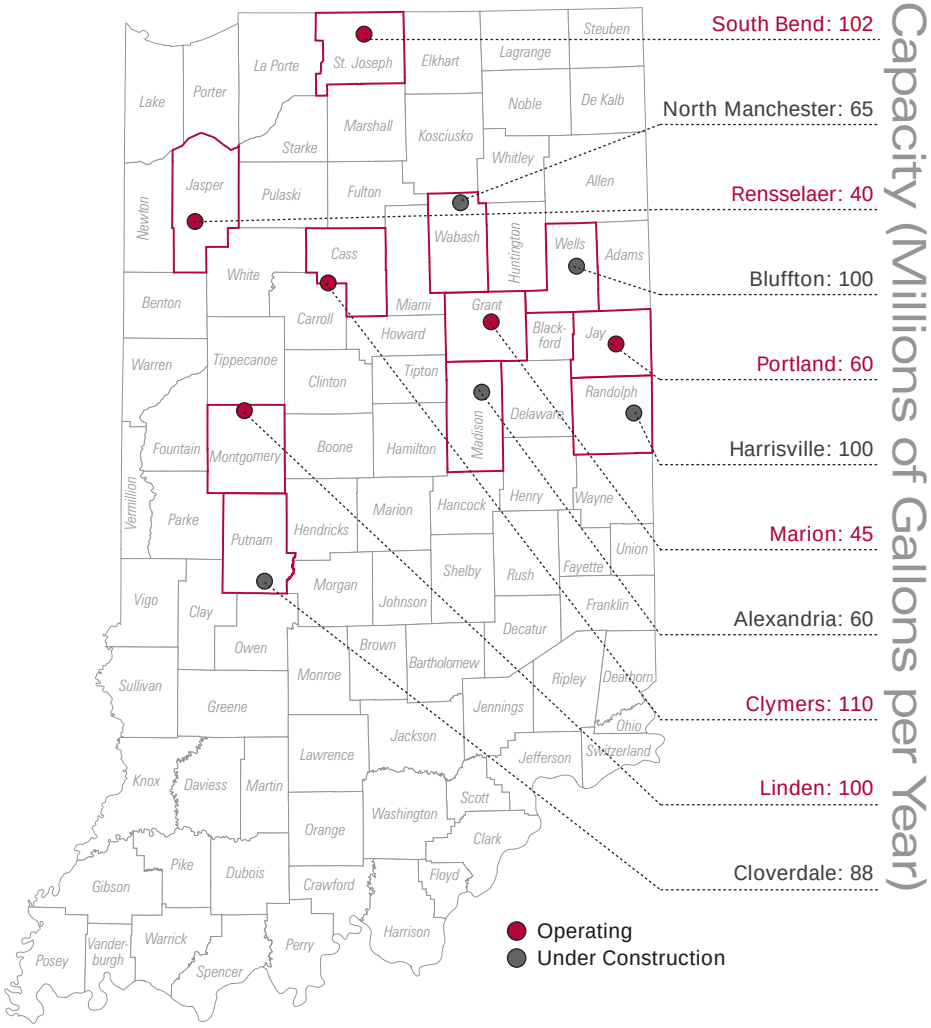
Let's start by discussing the developments in the biofuels sector. As of October 2007, there are six operating ethanol plants in Indiana at Clymers, Linden, Marion, Portland, Rensselaer, and South Bend; these plants utilize about 169 million bushels of corn. There are an additional five plants under construction that will start operating in 2008 at Alexandria, Bluffton, Cloverdale, Harrisville, and North Manchester (see **Figure 1**). Once these plants are on line, ethanol production in Indiana will utilize 300 million bushels of corn (equivalent to 30 percent of Indiana's 2007 corn production—up from just 4 percent of corn production in 2005). This new usage for corn is happening throughout the Corn Belt and is dramatically altering Indiana's agriculture.

Indiana also has a growing biodiesel industry. The largest facility is the new Louis Dreyfus, Inc. soybean crushing facility at Claypool, which will process 50 million bushels of soybeans per year, equal to 25 percent of Indiana's 2007 soybean production.

While the biofuels sector has grown dramatically in 2007 and will continue to grow in 2008, future growth will slow considerably due to a reduction in ethanol margins. Over the last year, the price of ethanol has fallen from around $2.50 per gallon in January to $1.58 per gallon as of October 15, 2007. At the same time, the price of corn (the primary cost of producing ethanol) has remained above $3.50 per bushel. These falling ethanol prices and sustained corn prices are causing the ethanol industry to experience a sharp reduction in profit margins.

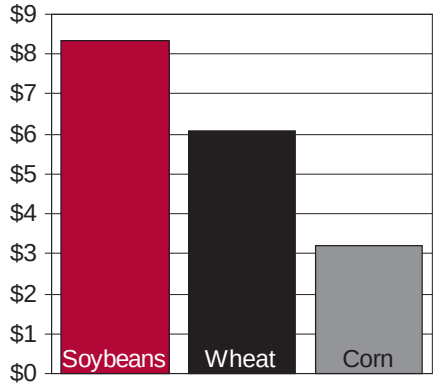
The biggest change in the ethanol industry is the decoupling of the price of ethanol from the price of crude oil. Even as the price of ethanol has declined almost $1 per gallon, the price of crude oil has increased from around $60 per barrel to over $90 per barrel. There are two reasons for this price decoupling: (1) the ethanol industry now produces enough ethanol to satisfy the oxygenate demand, and (2) the industry is facing capacity constraints in both blending and transportation

Figure 1
Ethanol Plant Locations and Plant Size, 2007



Source: Professor Chris Hurt, Purdue University, November 2007

Figure 2
Projected Prices for Soybeans, Wheat, and Corn, 2007–2008



Source: WASDE

infrastructure that will take a year or more to correct.

In addition to the biofuels sector, strong export demand and extremely tight worldwide wheat supplies are resulting in very high commodity prices. In the case of wheat, world stocks are the lowest since 1975–76 and U.S. wheat stocks are even tighter, at the lowest since 1948–49. As a result, the October 12, 2007, World Agricultural Supply and Demand Estimates (WASDE) projects that 2007–08 U.S. wheat prices will be around $6.10 (see **Figure 2**). These prices for wheat are well above the 1995–96 record of $4.55 per bushel. In the case of corn, exports are at their highest level in eighteen years. In addition, with all the new ethanol plants coming on line, the WASDE report projects that corn prices will be around $3.20 per bushel, higher than the 2007 price of $3.04. In the case of soybeans, with the sharp acreage reduction in 2007, supplies will be tight; the WASDE report projects that soybean prices will be around $8.35 in 2008, well above the 2007 price of $6.43. As a result of these high commodity prices, Purdue University estimates that Indiana net farm income will be around $2.2 billion in both 2007 and 2008, well above the 1997–2006 average of $1.2 billion. With these near-record farm incomes, the biggest challenge facing Indiana producers will be to manage increasing input costs.

Looking to 2008, the high commodity grain price, with its large impact on the returns to crop production, can be expected to increase the value of farmland. Farmland value also depends on factors including long-term interest rates, government price support payments, and real estate taxes. Given the current price levels for corn, soybeans, and wheat, prices continue to be well above the level where government price support payments would be triggered, reducing the influence of government programs. Long-term interest rates can be expected to increase, which would put downward pressure on land prices, but the rate increase is happening slowly. Overall, the biofuels and export boom increased the value of average quality Indiana farmland in 2007 by 17 percent and is expected to increase an additional 5 percent to 15 percent in 2008 according to the Purdue Land Value Survey.[1]

Note

1. The Purdue Land Value Survey is available at www.agecon.purdue.edu/extension/pubs/paer/2007/august/paer0807.pdf.

More information about the Indiana agricultural outlook can be found at: www.agecon.purdue.edu/extension/pubs/paer/2007/august/paer0807.pdf

Indiana

Jerry N. Conover, Ph.D.
Director, Indiana Business Research Center, Kelley School of Business, Indiana University

The outlook for Indiana's economy in the year ahead presents a mixed picture, not unlike that of the nation. We should expect more ups than downs, but unsettled economic forces at work beyond our borders make it difficult to hit this moving forecast target. Let's take a closer look at several key indicators of Indiana's economic health.

Jobs: Slowly but Steadily Improving

After a rough start with two months of job losses, Indiana employment in 2007 has resumed the long-term recovery trend that it has generally followed since July 2003, when it reached its lowest point of the decade. By late summer, total payroll jobs had climbed to within just 13,000 of their all-time high, but September's count gave up some of that momentum. Even with that slippage, the state had 18,000 more payroll jobs than it did a year earlier. The general upward employment trend, evident in **Figure 1**, should keep employment rising by approximately 15,000 more jobs in 2008.

However, not all sectors will share this growth equally. The manufacturing sector in particular is still undergoing a long-term employment decline in our state, just as it is throughout the nation. We expect Indiana will have about 11,000 fewer factory jobs at the end of 2007 than it did at the start, but the rate of shrinkage should abate considerably in 2008, perhaps even leveling off once some large new factory projects come on line. Additionally, Indiana remains the nation's most manufacturing-intensive state: the sector accounts for 18.9 percent of all our payroll jobs.

Meanwhile, construction has grown substantially in 2007, and

the sector should add another 4,000 jobs in 2008. Also, we forecast growth in various service sector jobs: health care (+9,000), professional and business services (+5,000), leisure and hospitality (+5,000), and state and local government (+3,000).

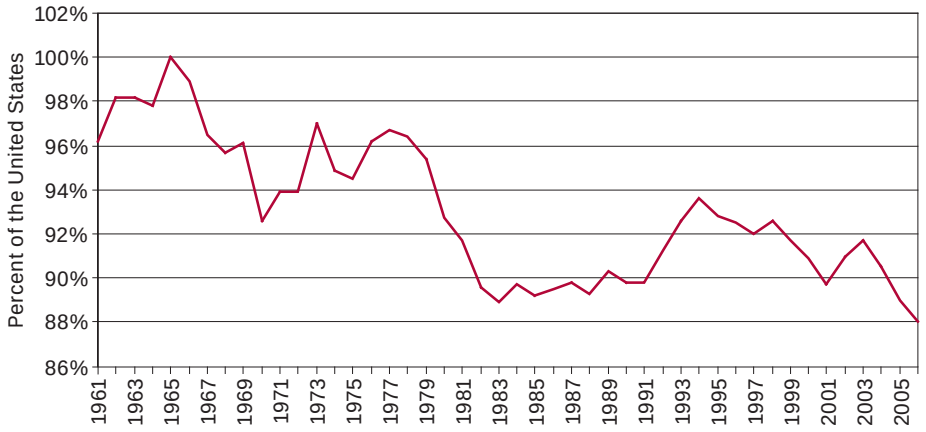
Figure 1 shows that the unemployment rate has been slowly declining in Indiana for about three years, and it often has been below the U.S. rate during this period. Though the rate tends to fluctuate from month to month, it's expected to generally hover in the range of 4.5 percent to 4.8 percent through most of 2008.

Figure 1
Indiana Nonfarm Payroll Employment and Unemployment Rates

Note: Employment and unemployment rates are seasonally adjusted
Source: Bureau of Labor Statistics

> *"Indiana's per capita personal income should rise modestly in 2008, growing by less than 2 percent (adjusted for inflation)."*

Figure 2
Indiana Per Capita Personal Income as a Percent of the United States



Source: Bureau of Economic Analysis

Income: Still Growing but Losing Ground

Economists' most widely watched income measure is personal income, which includes earnings from employment, income from investments and rental property, payments from governments (e.g., veterans' and social security benefits), among other sources. Indiana's per capita personal income (PCPI) should rise modestly in 2008, growing by less than 2 percent (adjusted for inflation). Though any growth is welcome, this slow rate of growth is well behind most other states. As a result, Indiana's PCPI now stands at 88 percent of the U.S. figure, its lowest relative level in decades (see **Figure 2**). Thirty-five states have higher per capita incomes; fortunately, Indiana's relatively low PCPI stretches farther due to a low cost of living compared to much of the nation.

State GDP: Also Growing Slowly

Indiana's gross domestic product (GDP), a measure of overall output of the state's economy, was more than $215 billion in 2006, ranking sixteenth among the states. However, after enjoying somewhat stronger growth a few years back, the growth rate has slowed in recent years. Since 2001, Indiana's GDP has grown by 10.6 percent, which surpasses only nine other states.

A key contributor to this trend is the continuing shrinkage of our manufacturing sector. Manufacturing generates 30.2 percent of Indiana's GDP, the highest share in the nation. Generally, when the manufacturing sector is shedding a lot of jobs (as has been the case nationally for

several years), states with a lot of manufacturing activity naturally feel the pain more than other states. However, if Indiana's factory sector should experience more growth in 2008 than it has witnessed in recent years, Indiana's GDP should show correspondingly stronger growth too.

Home (Again) in Indiana

Indiana's housing market has generally not experienced the rapid run-up in prices that characterized many parts of the nation during the recent "housing bubble" years. As a result, when that bubble started showing signs of weakness, our housing market was not as adversely affected as in many other states. Nonetheless, Indiana housing is certainly experiencing a slow market, with increasing supply and reduced demand.

Housing permits issued are expected to decline by about 18 percent to 19 percent this year and next, consistent with reports of limited new construction activity. Statewide sales of existing homes should drop about 9 percent in 2007 and 6 percent in 2008. It will likely remain a buyer's market well into the coming year, but by the end of 2008, a good portion of the excess inventory may be absorbed as buyers and sellers adjust to the new credit realities and demand starts picking up. When that happens, construction and home sales should start ticking upward again.

Conclusion

Indiana continues to feel the pinch of retrenchment in the manufacturing sector, but the state shows refreshing signs of growth in several industries and in several geographic areas. All in all, absent a major negative shock to the economy, the state should enjoy a mild breeze in its sails during the coming year.

Anderson

Barry C. Ritchey
Professor of Economics, Falls School of Business, Anderson University

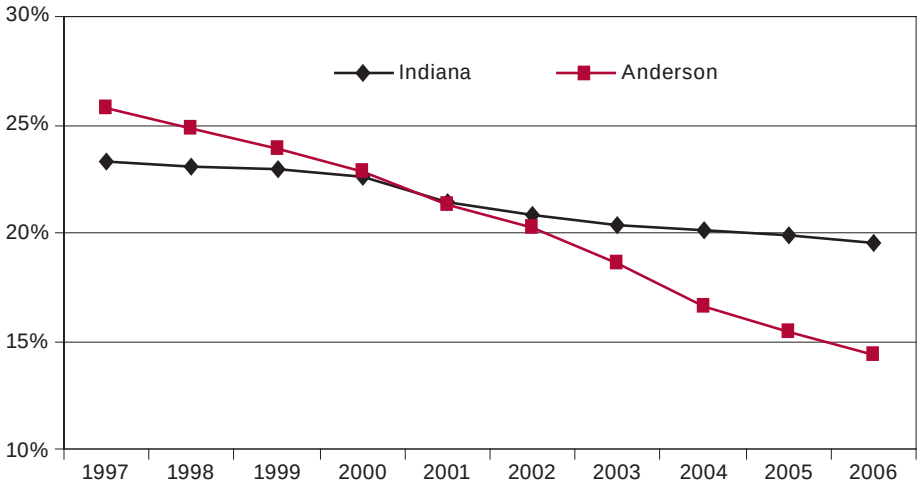
Employment is a central issue for the city of Anderson and Madison County. More specifically, for more than sixty years, automotive manufacturing employment has been the center of our economic base. After twenty-five years of decline, however, the automotive manufacturing industry has finally closed its doors on Anderson.

Due primarily to the decline in the auto industry, employment in Madison County has been falling over recent years. Ten years ago, there were 47,488 jobs in the county, with 12,246 of these jobs in manufacturing. As recently as 2006, there were 41,225 jobs in the county and only 5,901 of them were in manufacturing. Those figures translate into a 13 percent decrease in overall employment and a 52 percent decrease in manufacturing employment. **Figure 1** shows manufacturing as a percent of total nonfarm employment in Anderson and Indiana since 1997. No employment categories in the area show significant gains over the past four years. Consequently, unemployment in the city and the county is running far above normal. From January to August 2007, unemployment in the county averaged 6.9 percent while unemployment in the city of Anderson was 7.8 percent.

The decline in employment has led to declines in other areas that measure the economic condition of the community. Income levels are lagging behind the rest of Indiana. Average earnings in Madison County for 2006 are only 88 percent of average earnings for the state. The housing market has shown the impact of both local and national turmoil. The number of housing permits issued last year fell to only 328 for the county. This number is far below historic averages. In addition, the industrial tax base has been falling, causing residential property taxes to rise. On another measure, population projections indicate a declining population for the county.

The problem with relying on these types of statistics as diagnostic tools is that they represent too much of the past and not enough of the future of Anderson. The current numbers now

Figure 1
Manufacturing as a Percent of Total Nonfarm Employment, 1997 to 2006



Source: IBRC, using Bureau of Labor Statistics data

only serve to set a benchmark for the Anderson of the future.

The Anderson of the past is behind us, and the city of Anderson is being redefined. For the first time in decades, the people of Anderson have the opportunity to create the Anderson they want without interference from auto industry leaders in Michigan.

Recreating Anderson does have its obstacles. The auto industry left us with an economic and cultural legacy that must change. Auto industry jobs paid well and didn't require much education. We must now build a culture of education in our city.

The consolidation of the high schools into two schools and the recent construction of new school buildings are certainly positive moves for the city. The creation and retention of a workforce prepared for the twenty-first century is of paramount importance. Currently, only 14 percent of the adult population (twenty-five years of age or older) in Madison County has a bachelor's degree or higher. That number is particularly low compared to the rest of the state, where 22 percent of adults hold degrees in higher education. Improvement in the local school system should help increase the demand for housing, which is another obstacle to recreating Anderson.

The county has two immediate and simultaneous problems with the housing market—housing values are falling and property taxes are rising. People want to live where the purchase of a home is also an investment opportunity. They also want reasonable property taxes that reflect the level of public services provided to the community. With the falling industrial tax base and rising residential property taxes, restoring the industrial/commercial tax base and increasing the demand for housing are two important obstacles to overcome.

The biggest challenge facing Madison County is the ability to attract/create new jobs for the community. Mayor Kevin Smith's administration has shown an aggressive approach to recruiting employers into the area. The city has made new investment in its infrastructure. Older, unused buildings are being removed, improving the landscape of Anderson. The recent commitments from Nestlé and IBM are a reflection of those efforts. Not only do these additions bring new jobs to the area, but they are a source of additional business leadership for the community.

The county's strengths should help to overcome these obstacles. The creation of the Flagship Enterprise Center provides an opportunity for local companies and entrepreneurs to pursue their creativity and create jobs in the process. Recent recognitions from the Rotary, Forbes Magazine, and the Indiana Chamber of Commerce are a reflection of the potential strength of the city's leadership. When aggressively marketed, these types of awards can add to the attractiveness of the city and provide an important attraction tool to bring in potential employers. Aggressive leadership can take advantage of these types of positive recognition to help move Anderson forward. The actions that we take now will help to create a new Anderson University in the years to come.

> *"The biggest challenge facing Madison County is the ability to attract/create new jobs for the community."*

It isn't the trends of past data that tell us much about the new Anderson. Understanding the new Anderson requires a forward type of vision and not a backward one.

Bloomington

Jerry N. Conover, Ph.D.
Director, Indiana Business Research Center, Kelley School of Business, Indiana University

Population Growing

Things are looking brighter in many respects for the Bloomington area economy than they have in recent years. The city's population grew by an estimated 146 residents last year (2006), reversing a multi-year trend during which it decreased by hundreds of people annually. According to Census Bureau estimates, Monroe County grew by 1,140 residents, representing population growth of 0.9 percent, which is more than twice the rate of any other year this decade and the fastest growth among all of Monroe's neighboring counties. The county is forecast to gain about 2,160 more residents by the end of the decade.

Employment Increasing

For most of 2007, total payroll employment in the Bloomington Metropolitan Statistical Area (or MSA, comprising Monroe, Owen, and Greene counties) has been higher than a year earlier, reaching 84,200 jobs in September.

The most recent data for counties represent the first quarter of the year, during which Monroe County's payroll employment was up by 858 from a year earlier, with an increase of twenty-nine establishments. This represents a respectable growth rate for this area.

Manufacturing employment in the county has finally stopped shrinking after several years, with recent months averaging about 100 more manufacturing jobs over the year. This is a very welcome turnaround, especially considering that the county has gained six more manufacturing establishments this year (equaling 113 in the first quarter of 2007). Manufacturing wages reached a record high in current dollars

(averaging about $789/week), though in inflation-adjusted terms they've been roughly level over the past year. Either way, the multi-year decline in factory wages in Monroe County appears to have ended this year.

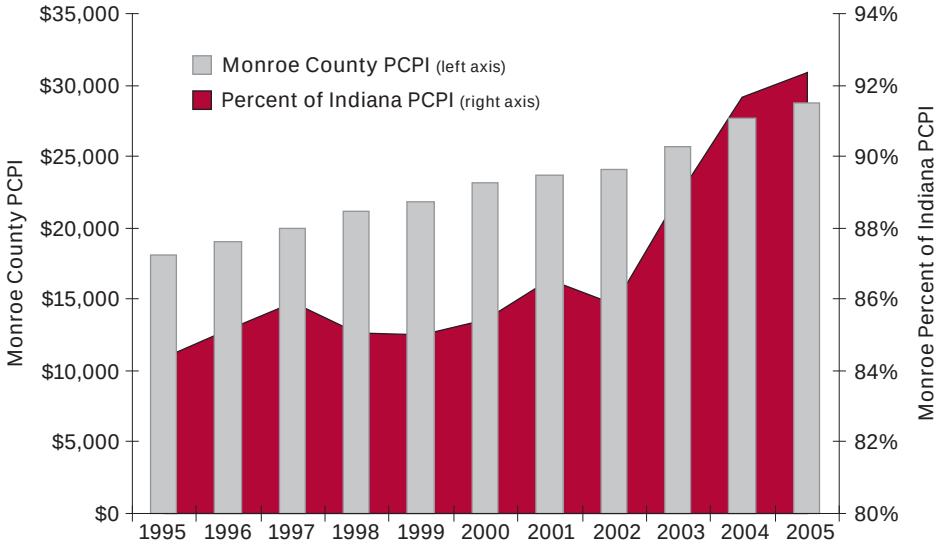
Sectors gaining more than 100 jobs over the year include health care and social services, administrative and support services, transportation and warehousing, and retail. The construction sector lost 223 jobs from the first quarter of 2006 to the same period in 2007, partially reflecting a slowdown in home construction. Some large-scale projects at Indiana University that have begun since then, however, should help reverse this loss.

Monroe County is forecast to gain about 500 to 800 jobs in 2008, with construction picking up as the year progresses. Manufacturing should hold its own, and life sciences firms could add a few hundred jobs if they can find enough skilled workers.

Personal Income: Gaining on the State

Per capita personal income (PCPI) grew in the county by $1,160 in the most recent year for which data are available (2005). This broad measure of income from a number of sources shows that Monroe County grew at the same rate as the nation, with county PCPI equaling 83.5 percent of the national figure. However, relative to Indiana, which is growing more slowly, the county moved over the year from 91.7 percent up to 92.3 percent of the state average (see **Figure 1**). These trends are expected to continue in the year ahead.

Figure 1
Monroe County Per Capita Personal Income



Source: IBRC, using U.S. Census Bureau data

Economic Output: Encouraging Growth

The U.S. Bureau of Economic Analysis has recently released estimates of gross domestic product (GDP) at the MSA level for the first time. These preliminary figures on economic output (valued in dollars) show that the Bloomington metro area's output from the manufacturing sector grew by 11.6 percent over the year (2005), twice the national rate. The retail sector's output grew by a slow 2.3 percent, less than half the national rate. The professional and business services sector output expanded by 13.3 percent, well above the national rate of 8.4 percent. These are encouraging signs of growth for the local area.

Real Estate: Slow, but Better than Many Places

The Bloomington area real estate market, though slow, is faring substantially better than many places. The housing bubble that raised prices greatly in many parts of the country never took hold in most of Indiana, so our housing market didn't have as far to fall when the bubble burst. Residential sales are down about 6 percent to 7 percent so far in 2007, and home prices are generally flat. Demand is actually strong in the below-$250,000 range, though supply is limited; higher priced homes are showing substantially longer time-on-market.

There's very little new speculative home construction under way, although custom homes continue to be built. The commercial (office and retail) space market is fairly busy, but very little new construction is underway, and supply is tight for good-quality office space. The overall real estate outlook for 2008 calls for slow growth most of the year, with a modest upturn later in the year as the housing and credit crunches ease.

"Monroe County is forecast to gain about 500 to 800 jobs in 2008, with construction picking up as the year progresses. Manufacturing should hold its own, and life sciences firms could add a few hundred jobs if they can find enough skilled workers."

Columbus

Pedro F. de Araujo
Teaching Fellow, Division of Business, Indiana University–Purdue University Columbus

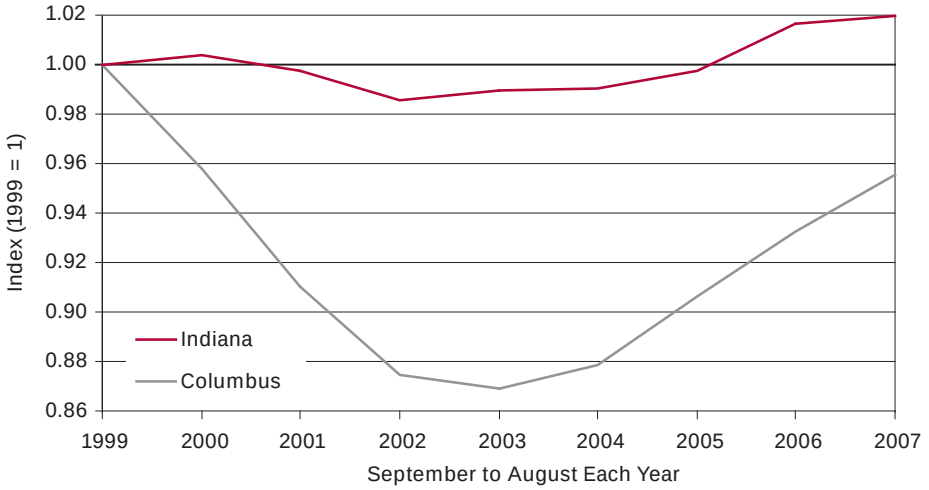
The Columbus region has been affected by the overall housing crisis. However, the economic outlook for 2008 is positive but modest. This brief report will provide some important statistics about overall employment, job creation by sector, and the housing market, and will offer predictions on some key variables.

Employment

The unemployment rate for Columbus has decreased 13.8 percent, from 4.4 percent in 2006 to 3.8 percent in 2007.[1] This rate is much lower than the national and state unemployment rates, which equal 4.5 percent and 4.8 percent, respectively. This decrease corresponds to a 2.5 percent increase in the employment level from 36,523 workers to 37,411 workers, a gain of 888 jobs.

Three months after the 2001 recession, which lasted from March 2001 to November 2001 according to the National Bureau of Economic Research, the Columbus area faced its largest recorded unemployment rate of 6 percent. Since that time, there has been a modest recuperation in the labor market. The net gain in jobs was 3,798, putting Columbus' current employment level still 4.5 percent lower than the booming years of the late nineties. This corresponds to a gap of around 1,750 jobs. Hence, there is still some ground to recover. Note, however, that Indiana's current employment is already 2 percent above the 1999 level. An employment comparison between Columbus and the state of Indiana shows a much larger response to the recession in the Columbus area (see **Figure 1**). This may be due in part to the large dependency Columbus has on the manufacturing sector.

Figure 1
Employment in Columbus and Indiana



Note: Each year has been redefined to be from September of the previous year to August of the current year. For example, 1999 is September 1998 to August 1999.
Source: Bureau of Labor Statistics

Jobs by Sector

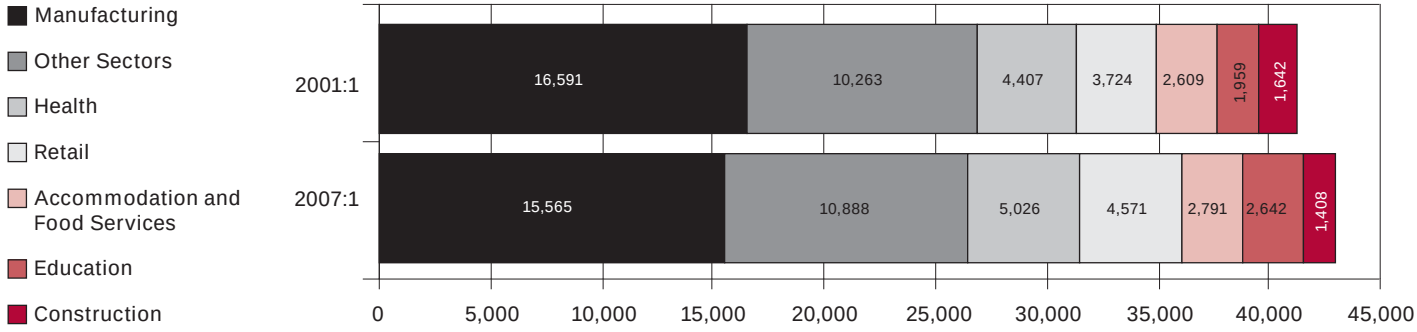
The Business Outlook Panel has predicted modest growth in manufacturing jobs for the state in 2008. If this happens, the Columbus area should expect an increase in total jobs for the region. The assumption that an increase in manufacturing jobs can affect total jobs in Columbus comes from the fact that the manufacturing sector accounts for 36 percent of total jobs in Columbus; therefore, the trend in total jobs follows the trend in manufacturing jobs quite closely (see **Figure 2**).

Even though 36 percent is a significant number, it is 4 percentage points lower compared to the first quarter of 2001,[2] but 2 percentage points higher when compared to the levels in 2003 and 2004. Jobs have grown steadily but modestly in this sector since 2003, from 13,580 in the second quarter of 2003 to

Figure 2
Quarterly Job Index for Bartholomew County

Source: Bureau of Labor Statistics

Figure 3
Bartholomew County Jobs by Sector



Source: IBRC, using Bureau of Labor Statistics data

15,565 in the first quarter of 2007. This represents an average quarterly increase in jobs of just 124, which is still 6 percent lower than the number of jobs available during the first quarter of 2001.

The health sector has been gaining importance in Columbus and currently accounts for 12 percent of total jobs. Jobs in this sector have grown 14 percent from 4,470 in the first quarter of 2001 to 5,026 in the first quarter of 2007, which represents the third largest job growth in the region, only losing to retail trade (23 percent) and educational services (35 percent).

The accommodations and food services sector accounts for 7 percent of total jobs and, since the recession, has experienced a 7 percent growth rate, which corresponds to 182 more jobs.

The construction sector represents a small portion of total jobs in Columbus (3 percent). Construction jobs have decreased 15 percent since the first quarter of 2001. For a visual assessment of the relative importance of each sector, see **Figure 3**.

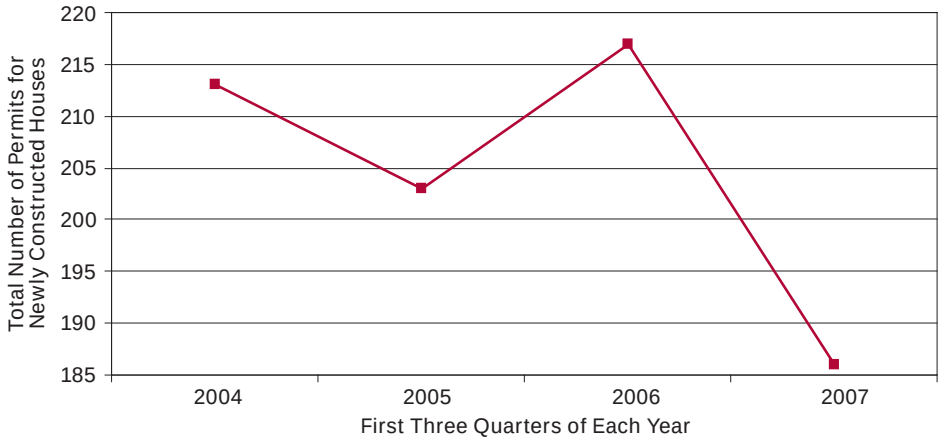
Housing

Changes in the number of houses available—measured by the number of permits for newly owned homes—is more volatile in Columbus than in Indiana as a whole. The fact that Columbus housing is more volatile may imply larger swings in the housing market for this region whenever the national economy is in crisis. Therefore, the housing market in Columbus was affected by the national housing crisis.

There was a sharp decline in the number of house permits for the first three quarters of 2007 compared to the first three quarters of 2004, 2005, and 2006 (see **Figure 4**). Specifically, permits were down 14 percent relative to 2006, from 217 to 186. Therefore, the estimated number for newly constructed houses in 2007 is smaller than in the previous three years.

The Federal Reserve Board reduced interest rates in the latter part of 2007,[3] and the Kelley School of Business forecasts that the rate will be even lower by the end of 2008. These lower rates can affect consumers and businesses positively by reducing the strain on variable rate loans and stimulating new borrowing. This can potentially decrease the number of used houses for sale and increase the number of new permits for newly constructed housing in 2008.

Figure 4
New Privately Owned Housing Units in Bartholomew County



Source: U.S. Census Bureau

Notes

1. Since unemployment data for 2007 were only available until August, for comparison purposes, all yearly unemployment rates were calculated by taking the average monthly unemployment rate from September of the previous year to August of the current year.
2. This is the last quarter before the recession officially started.
3. The rate dropped 1.25 percentage points from July 2007 to November 2007.

Evansville

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The Evansville economy continues to exhibit positive year-over-year growth. In 2007, personal income is estimated to increase by 5.6 percent compared to an average annual growth rate of 4.3 percent between 2002 and 2005 (see **Figure 1**). Economic performance in 2007 was driven by job creation in private service-providing industries, which outweighed weakness in manufacturing and retail trade. The manufacturing sector continues to be an important base to metro area household incomes and consumer spending activity, even as the economy diversifies away from manufacturing-industry dependence (see **Figure 2**).

During 2007, construction payrolls continued to grow despite evidence of a slowing housing market, deteriorating credit quality, and higher delinquency rates. Single-family housing starts have declined by more than 20 percent year-over-year. Existing home prices declined from an average of $100,300 in 2006 to $98,300 in 2007. Mortgage originations also dropped from $1.6 billion in 2006 to $1.5 billion in 2007, while personal bankruptcies per 1,000 persons increased from 3.1 to 5.7.

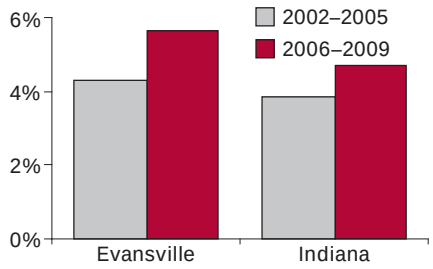
Although the Evansville economy is one of the most manufacturing-dependent among metro areas in the nation, it has not experienced the same degree of hardship as other manufacturing-dependent Midwest metro areas. Since 2000, Evansville's manufacturing workforce has fallen by 7 percent, or about 2,600 workers. Compare that to the 14.7 percent reduction in Indiana's manufacturing workforce over the same period. At the same time, manufacturing earnings as a share of total earnings has remained stable at about 28 percent between 2001 and 2006 in the Evansville metro economy. The growth of the auto industry, headed by top employer Toyota, partly explains the resiliency of Evansville's manufacturing sector. The strong demand for primary metals in recent years, which has kept Alcoa among the largest local employers, has also aided Evansville's resiliency.

Current efforts to attract future high-tech related industries, via the creation of a downtown technology park, an emphasis on workforce development, and relatively low office rents (that average $50 below those nationally), are sources of momentum for economic expansion. The outlook forecasts increased momentum in the Evansville metro economy as a result of hiring and investment activity in the service sector.

In 2008, we project that output will increase by 2.1 percent, the number of jobs will increase by 1,600, and personal income will grow 4.3 percent. **Figures 1** and **3** provide a comparison of forecasts for the Evansville economy and the state of Indiana for the 2006–2009 period.

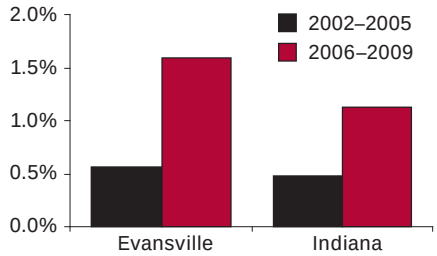
Ongoing challenges for the Evansville economy include adjustment away from manufacturing-industry dependence, particularly in nondurable manufacturing (see **Table 1**), an elderly age cohort as a proportion of the population that is higher than the state average, and relatively slow population growth—below the state and national average.

Figure 1
Average Growth in Personal Income



Source: Center for Econometric Model Research

Figure 3
Average Growth in Total Employment



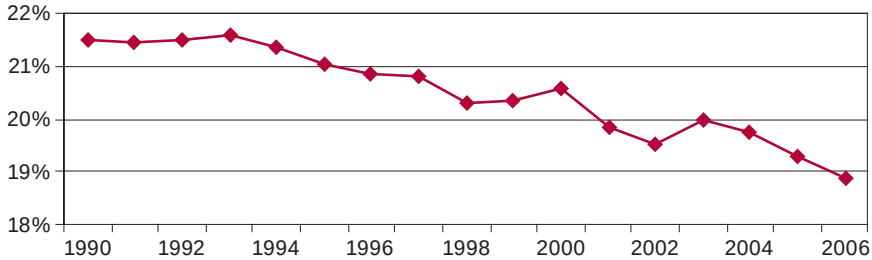
Source: Center for Econometric Model Research

Table 1
Manufacturing Employment as a Percent of Total Employment, 2006

Industry	Evansville Metro	Indiana	United States
Manufacturing	19.0	19.0	10.4
Durables	54.1	73.3	63.4
Nondurables	45.9	26.7	36.6

Source: IBRC

Figure 2
Manufacturing Employment as a Percent of Total Nonfarm Employment in the Evansville Metro



Source: IBRC

Fort Wayne

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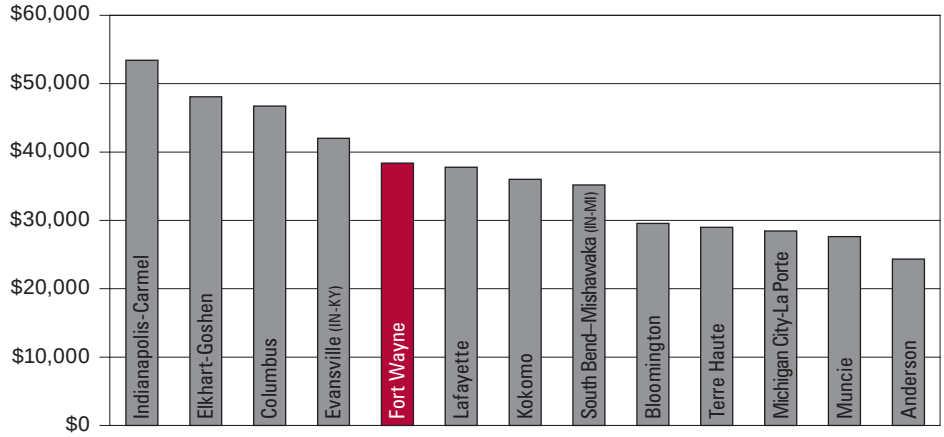
In September 2007, the U.S. Bureau of Economic Analysis (BEA) released an important new tool for measuring the strength, composition, and output of urban economies. For the first time, we have federally compiled and easily accessible information on the gross domestic product (GDP) for all 363 metropolitan statistical areas (MSAs) in the United States. GDP measures the market value of final goods and services produced within a given geographic area over a given period of time. This data had previously been available at the state and national levels, but not for sub-state areas. According to the BEA news release, metropolitan GDP is their "preferred and most comprehensive measure of economic activity."[1] The Bureau has provided five years of annual GDP data from 2001 through 2005.

Along with employment and wage data, GDP information now provides an important third measure of comparative local economic activity. Using population size to equalize for the varying size of the 363 MSAs, the Fort Wayne metropolitan area[2] ranked 130th, with a per capita GDP of $38,379 in 2005. In comparison, the Indianapolis-Carmel MSA has a per capita GDP of $53,441 and ranked twenty-fourth among all U.S. MSAs. Among those metro areas primarily located within Indiana,[3] the Elkhart-Goshen ($48,091), the Columbus ($46,719), and the Evansville ($42,012) MSAs also had per capita GDPs higher than the Fort Wayne area in 2005 (see **Figure 1**).

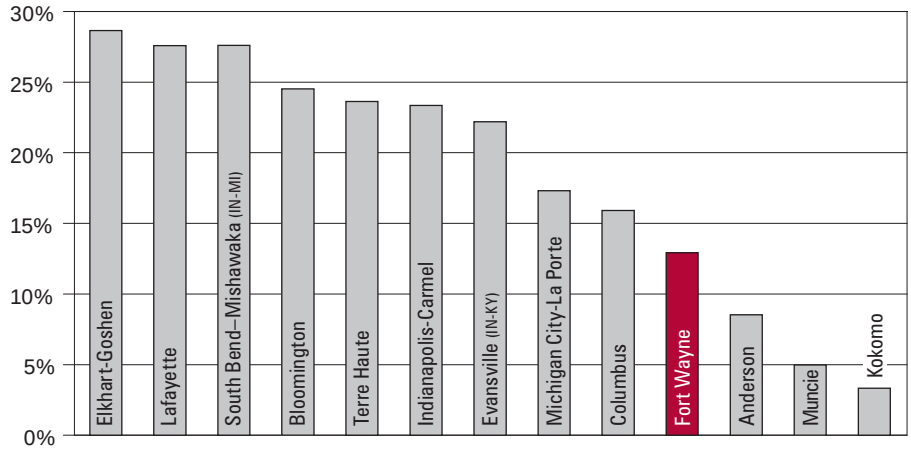
Figure 1
Per Capita Gross Domestic Product in Indiana MSAs, 2005



Source: Bureau of Labor Statistics

The economic downturn in manufacturing in the early part of this decade hit the Fort Wayne area particularly hard. An examination of the changes in metropolitan GDP between 2001 and 2005 provides yet another indicator of that impact. The Fort Wayne MSA ranked 339th among the 363 MSAs in growth in GDP during this period, experiencing a 12.9 percent increase. The average increase for all U.S. MSAs was 22.8 percent. As illustrated in **Figure 2**, of the thirteen metro areas primarily located in Indiana, the Fort Wayne MSA ranked tenth in GDP growth between 2001 and 2005.

Figure 2
Percent Growth in GDP in Indiana MSAs, 2001 to 2005



Source: Bureau of Labor Statistics

Let us shift gears and look at some recent employment trends in northeast Indiana. As was done in the past few outlooks, we will again use the Fort Wayne-Huntington-Auburn Combined Statistical Area[4] (CSA) as the best geographic representation of the Fort Wayne area economy. Between the first quarter of 2001 and the first quarter of 2007, this seven-county area lost a total of 4,124 jobs based on information from the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW). This was a loss of approximately 1.5 percent of total employment in early 2001. Further analysis indicates that during the six-year time period, the area lost 10,939 manufacturing jobs. That loss was partially offset by a gain of 5,770

jobs in the health care and social services sector and a gain of 1,045 jobs in all other sectors combined. However, employment location quotients indicate that manufacturing tends to bring more outside wealth into northeast Indiana than does the health care and social service sector.[5] The health care and social service sector tends to more often serve needs within the community rather than to export goods and services to those outside the region. To some degree, Fort Wayne has been trading basic sector jobs for jobs that tend to be more oriented to serving its internal needs.

The prior loss of manufacturing employment may still be impacting the local economy. Between the first quarter of 2001 and 2007, employment in retail trade is down by approximately 2,100 jobs. This may be an indication that the losses in higher-paying manufacturing employment are reverberating throughout the regional economy, tracking a relative loss of disposable buying power.

Examining QCEW employment totals by quarter for the Fort Wayne CSA shows that, through the first quarter of 2007, the area has experienced twelve consecutive quarters of job growth when comparing the same quarter of the prior year. The last comparable period of such sustained employment growth in the region ended in the third quarter of 2000. Comparatively, the state of Indiana experienced a somewhat similar thirteen consecutive quarters of job growth through the first quarter of 2007.

The available QCEW employment data is for the first quarter of 2007, so we must look to another source of employment data for more recent trends. The Bureau of Labor Statistics Current Employment Statistics (CES) does provide very recent information at the MSA level but, unfortunately, not for CSAs. This source indicates that the Fort Wayne MSA continued to experience job growth throughout the summer and fall of 2007. While the rate of job growth has softened somewhat, it has remained a sustained positive indicator for the region. As illustrated in **Figure 3**, we now have twenty-seven months of continuous job growth based on CES data for the Fort Wayne metro area.

What is on the horizon for the Fort Wayne area economy in 2008? Two external factors are likely to negatively influence job growth

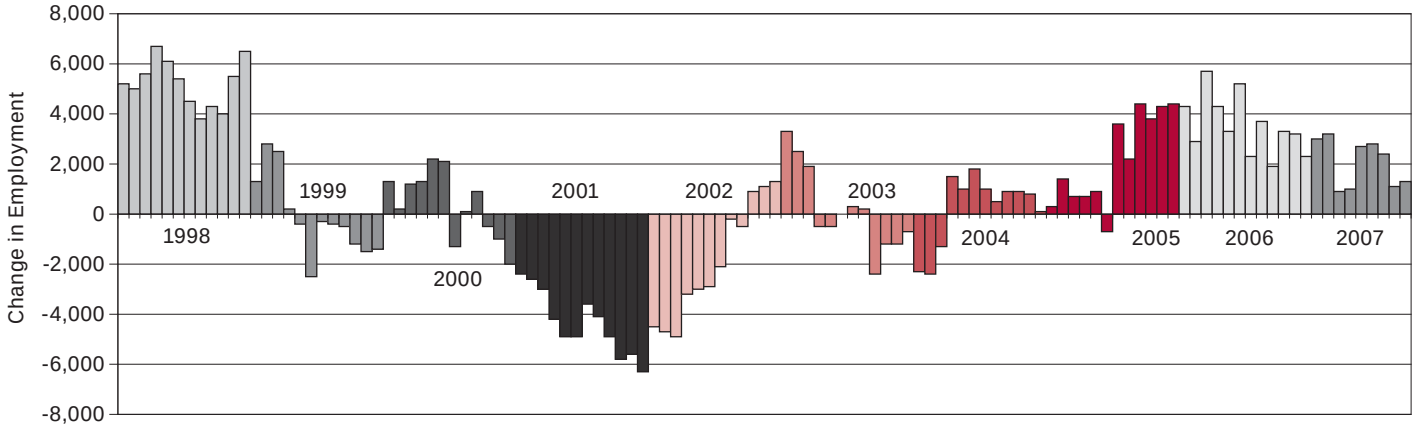
1. the ongoing turmoil in the domestic automotive industry impacting the supply network scattered across the region
2. the slump in housing construction caused in large measure by the crisis in single-family housing finance issues.

Additionally, the area will continue to feel the reverse multiplier effect of several business closures that occurred over the past year. Conversely, the internal strength of the economy, both within the region and throughout the state, will continue to generate modest economic growth. The seven-county Fort Wayne-Huntington-Auburn CSA will likely experience a continued net increase in total employment in 2008—perhaps in the range of 1,000 to 1,250 jobs on a base of approximately 278,000 to 280,000 existing jobs.

Notes

1. The news release is available at www.bea.gov/newsreleases/regional/gdp_metro/gdp_metro_newsrelease.htm.
2. The Fort Wayne MSA includes Allen, Wells, and Whitley counties.
3. The Chicago-Naperville-Joliet, the Cincinnati-Middletown, and the Louisville-Jefferson County MSAs include some Indiana territory but the data is dominated by the economies of the larger core cities located in adjoining states.
4. The Fort Wayne-Huntington-Auburn CSA includes Adams, Allen, DeKalb, Huntington, Noble, Wells, and Whitley counties.
5. Manufacturing employment in Indiana's Economic Growth Region 3 had a 2006 location quotient of 2.4, while the health care and social service sector had a location quotient of 1.1.

Figure 3
Total Employment Change from Previous Year in the Fort Wayne MSA



Source: Bureau of Labor Statistics

Gary

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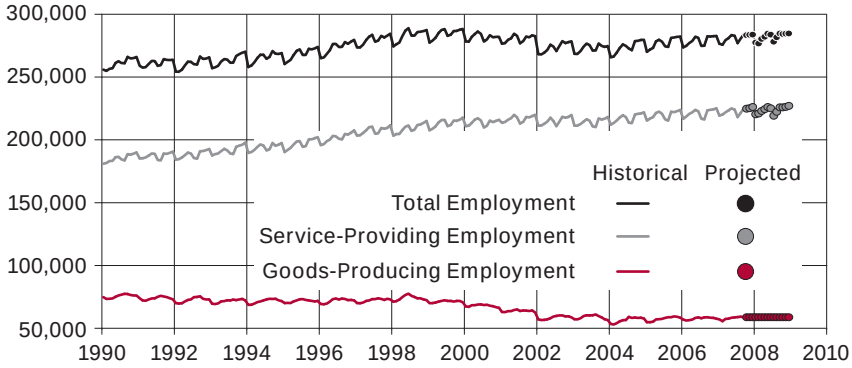
Northwest Indiana continues to lag both the state and the nation in terms of growth. From September 1990 through September 2007, payroll employment[1] in northwest Indiana grew at an average annual rate of 0.6 percent, while U.S. employment growth was 1.4 percent per year, and the state's employment grew at an average annual rate of 1 percent.[2] Household employment in northwest Indiana grew even more slowly, averaging only 0.4 percent, compared with 1.2 percent growth for the nation and 0.8 percent for Indiana. Perhaps surprisingly, the unemployment rate in northwest Indiana has not been exceptionally high, falling from 5.1 percent in 1990 to 4.2 percent in September 2007. During that same time, the nation's rate declined from 5.1 percent to 4.5 percent, and Indiana saw a smaller drop from 4.5 percent to 4.1 percent.[3]

The last year has been more of the same for northwest Indiana, with payroll employment growth (0.5 percent) continuing to lag the nation (1.8 percent), but atypically leading the state (0.3 percent).

In this case, the past is almost certainly prologue. We can anticipate generally slow employment growth for the region, with more downside risks than upside opportunities. We anticipate growth in total employment of about 0.3 percent, with a net addition of about 1,000 jobs to the local economy. Given a continuation of the labor force growth of the past two decades, this should result in a roughly stable unemployment rate.

The risks, however, are quite real. As we will see, building permits for housing have declined sharply in northwest Indiana, but construction employment has not followed. There is a clear risk here that the slowdown in housing permits will eventually result in declining construction employment. In addition, U.S. automobile sales (and production) in 2007 declined 1.6 percent compared to 2006 levels. Sales by GM, Ford, and Chrysler were down even more (4 percent), and inventories of unsold cars have declined.[4] With sales and inventories falling, production cutbacks have certainly occurred. Should auto sales continue to fall, the steel industry may see lagging demand for its products, which would negatively affect employment.

Figure 1
Employment in the Gary Metro Division



Sources: STATS Indiana and the Bureau of Labor Statistics

The Overall Economy: Employment and Population

The northwest Indiana economy will continue to add jobs, but at a very slow rate. Overall, we can look for about 0.3 percent growth in employment, or about 1,000 new jobs (see **Figure 1**). Given the slow growth in the region's population and labor force, this may be enough to hold the local unemployment rate at or near its current 4.3 percent level—although a moderate increase (to the 4.5 percent to 4.9 percent range) is not impossible. The slow growth in employment means that there should be little upward pressure on wages. Overall, growth in nominal (money) wages should keep pace with inflation, leaving real wages, on average, roughly unchanged. Most of the employment growth is likely to be in Porter County (with Lake County likely even to lose jobs) as businesses continue to relocate toward the counties with more rapid population growth. Note, however, that population growth is not likely to be robust between now and 2010 anywhere in northwest Indiana.

The Indiana Business Research Center (IBRC) projects average annual population growth in the region of 0.3 percent between 2005 and 2010, with Porter County "leading" the way with an average annual growth of 1 percent. Jasper County's population is projected to rise by about 0.9 percent per year—only 1,400 additional residents in total—between 2005 and 2010. The IBRC projects slight population declines in Newton County. Population is projected to shrink in the central labor force group—ages 25 to 44—in northwest Indiana between 2005 and 2010. This age group is projected to shrink fastest in Lake and Newton counties—around 0.5 percent per year or faster.[5] This decline in the prime-working-age population is one of the factors that makes northwest Indiana less attractive as a location for new businesses. It means that the labor force is also unlikely to grow much—if at all. Therefore, firms

trying to expand may find it difficult to hire workers with the skills they need.

While the overall economy will grow slowly, we now turn to some specific sectors—some of which will do better and others worse.

Goods-Producing

Construction: Construction employment has remained reasonably stable at about 18,000 to 20,000 jobs over the past decade. This masks, however, an increase in employment in the construction of buildings, which has increased from around 4,000 jobs (1996) to around 6,000 jobs in 2007. Much of this increase has apparently been in the home-building industry.

Not surprisingly, residential building permits issued in northwest Indiana increased by nearly 30 percent between 2000 and 2005. However, permits fell by approximately 20 percent in 2006 alone, and statewide and national data suggest that the decline has persisted into 2007. In Indiana, residential building permits averaged about 2,500 per month between March and June 2007, but have since declined by about 20 percent for July through September.[6]

While the effects of the decline in permit issuance have yet to show up in Indiana's construction employment numbers, they have clearly had an effect nationwide, where employment in residential construction is down by 25,000 jobs (about 2.4 percent) since peaking in June. While such a decline would have only a modest impact on the local economy (it would translate to a loss of about 150 construction jobs), it's worth recalling that the increase in residential construction has allowed construction employment to remain stable. Continued stability in construction employment would look like a good outcome, given the current uncertainties. Indeed, given that construction continues to be a high-wage industry (average annual earnings in 2005 of about $45,800—nearly 24 percent above the regional average), declining employment in construction would have a disproportionately adverse impact. For this and all subsequent earnings data see **Table 1**.

Manufacturing: The last two years have been, in relative terms, good ones in northwest Indiana. Following two decades of declining employment, manufacturing stabilized beginning in 2004. Overall employment has held steady at about 38,000 jobs and, perhaps more importantly, employment in metals has also stabilized at around 18,500 jobs. This stability has accompanied a strong world demand for steel, with little downward pressure on prices. Indeed, the steel industry has maintained its employment level over the past year despite declining auto sales and production. While steel no longer has the extraordinarily large role in the local economy that it did in the 1960s and 1970s, it is still a major source of income. Bureau of Economic Analysis (BEA) data indicate that primary metals workers earned an average of about $97,900 in 2005, more than 260 percent of the regional average. Manufacturing employment is, overall, a very high-wage sector, with average annual earnings in 2005 of nearly $79,000.

The outlook for the steel industry may not be all that promising. As noted above, auto sales and production have declined noticeably in 2007. This is likely to exert downward pressure on the demand for steel. In addition, the rapid growth of steel-making capacity both in China and in India is likely to cause downward pressures on price and on demand for U.S.-made steel. Once again, we have an important industry in which stability would look like a favorable outcome.

Elsewhere, the oil company BP continues its plans to overhaul and expand its refinery in Whiting. While this effort has been slowed by controversy over the potential environmental impacts of the development and of the permits originally issued by the Indiana Department of Environmental Management,[7] it does appear likely to move forward. The project will add about 1.7 million gallons per day (about a 15 percent increase) to the refinery's capacity. Although it will provide significant support to local construction employment during the construction phase, the expansion will apparently add only about eighty permanent jobs.[8]

Table 1
Annual Compensation per Employee for Selected Industries, 2005

Industry	Annual Compensation per Employee
All Industries	**$37,054**
Manufacturing	$78,962
Primary Metals	$97,944
Wholesale Trade	$53,306
Construction	$45,789
Government	$44,638
Federal, Civilian	$80,629
State	$47,405
Local	$42,243
Health Care and Social Assistance	$38,581
Retail Trade	$22,126
Educational Services	$19,256
Accommodation and Eating and Drinking Places	$13,082

Source: STATS Indiana, using Bureau of Economic Analysis data

Service-Providing

Services, broadly defined, have provided all of the net employment growth in northwest Indiana over the past two decades. It seems likely that continued employment growth in services will be necessary if the local economy is to add any significant number of new jobs. The service sector now accounts for 79 percent of all jobs in northwest Indiana, up from its 71 percent share in 1990. However, jobs in the service sector tend, in general, to provide below-average compensation. BEA data indicate that only around 60 percent of total compensation in 2005 went to people working in the service sector, well below that sector's share of employment. Two parts of the service sector stand out for rapid growth: health care and social services and accommodation and food services.

Health Care: The health care sector now accounts for nearly 13 percent

of total employment, up from about 9 percent in 1990. Employment has grown considerably more rapidly than in other sectors, rising about 2.6 percent per year (a total of 13,000 additional jobs) since 1990. Little of this growth has occurred in hospitals, which have added only 900 jobs since 1990 (a 0.3 percent average annual growth). Medical practices and free-standing clinics have grown very rapidly. Health care jobs are a mix of very well-paying jobs and fairly low-paying jobs. As a result, the sector is fairly average, with average annual compensation of about $38,600 (4 percent above the regional average). Health care providers face a difficult environment with pressures on them to reduce costs and charges and with reimbursements from government programs (Medicare and Medicaid, chiefly) generally failing to cover their costs. Given the aging population and recent initiatives, particularly at the state level, to address some of the funding issues, continued growth in the health care sector seems likely, with 900 new jobs being added in the next year.

Accommodations and Food Services: Food services became a part of the hotel/motel sector rather than retail sector when industry sectors were redefined. This has also been a fast-growing sector, adding jobs at the rate of 1.4 percent per year since 1990 (a total of 4,500 additional jobs). Unfortunately, compensation in this sector—around $13,000 per employee per year—is the lowest in the region (about 35 percent of the regional average); this is partly because jobs in this industry tend to be part-time. We can expect continued growth in employment, with about 400 additional jobs over the next year.

Between them, health care and accommodations and food services will account for more than 100 percent of the total job growth in the local economy. (This is offset by a decline of about 300 jobs in all other sectors combined.)

Financial Services: The banking, insurance, and other financial services sector has undergone a major transformation, both locally and nationally (to say nothing of the global transformation). Bank mergers have created increasingly large financial institutions and have reduced local ownership of such institutions. One consequence is that employment growth in the financial services sector has been modest outside financial centers. As a result, employment in financial services has declined slowly from its mid-1990s peak (about 11,400 jobs) to about 10,000 jobs in 2007. Finance now accounts for about 3.5 percent of jobs locally. Workers in finance, somewhat surprisingly, earn less than an average level of compensation, with the sector accounting for only 2.7 percent of total compensation, according to the BEA. Given the trends of the past decade, we cannot expect the financial services sector to provide any significant number of new jobs; indeed, a continued slow decline seems more likely.

Retail: The retail sector has grown at almost exactly the same rate as the overall economy, adding jobs at a 0.5 percent average annual rate since 1990, and holding its share of total local employment at about 12.6 percent. This is another sector with below-average compensation, with average annual compensation of about $22,100 (about 60 percent of the regional average). Again, the prevalence of part-time jobs in retail is an important factor. Despite the opening of a major retail outlet (Cabela's) in Hammond, we can expect only modest employment growth—perhaps an additional 100 jobs in the next year.

Government

Total government employment, after growing rapidly between 1990 and 1999, has remained relatively stable since, averaging about 40,500 jobs. This has been driven entirely by changes in local government employment. The difference between total and local government employment (federal and state government) has remained virtually constant since 1990, at around 7,000 jobs. It seems likely that government employment in northwest Indiana will remain roughly constant over the next year and that the distribution of employment between federal, state, and local governments will also remain unchanged. Employment in local education will remain the largest single contributor to government employment, accounting for around 45 percent of the jobs.

Summing Up

As it has been for more than twenty years, northwest Indiana remains a slow-growth region. Overall economic activity and employment growth will continue to lag the state, and population growth for the foreseeable future seems likely to be very slow. Stable employment (at best) in construction, manufacturing, and government, coupled with modest increases in health care and in accommodations and food services, will lead to employment growth of about 1,000 jobs (+0.3 percent) in the coming year. The continued slow growth in population and the labor force, however, means that the unemployment rate is likely to remain stable, or rise only slightly.

Notes

1. Payroll employment is employment by place of work, whereas household employment is employment of area residents. Although these tend to move in the same direction, they are not identical measures.
2. Unless otherwise specified, all data in this report have been obtained from STATS Indiana (www.stats.indiana.edu).
3. Measurement errors become larger moving from larger to smaller geographical areas.
4. Export Development Canada (www.edc.ca/english/docs/ereports/commentary/publications_13457.htm).
5. The outlook is not bright, even taking a longer view. The IBRC population projections suggest an average annual population growth rate of 0.3 percent between 2005 and 2040, and a decline in the age 25–44 population cohort of 0.3 percent per year between 2005 and 2040.
6. U.S. Census Bureau (www.census.gov/const/www/permitsindex.html).
7. David Schaper, "BP Backtracks After Criticism over Lake Pollution," *NPR*, August 23, 2007. Available at www.npr.org/templates/story/story.php?storyId=13903534.
8. Jack Lyne, "BP adding 2,080 Jobs, Investing $3.25 B in Blunder-Prone U.S. Arm," *Site Selection*, October 16, 2007. Available at www.siteselection.com/ssinsider/bbdeal/bd061016.htm.

Indianapolis-Carmel

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The following data and forecasts refer to the entire Indianapolis-Carmel Metropolitan Statistical Area (MSA), which includes Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, Putnam, and Shelby counties. Unless otherwise noted, data comes from STATS Indiana at www.stats.indiana.edu.

Income

Between the first quarters of 2006 and 2007, income growth slowed significantly. Annual growth in real average weekly compensation in the Indianapolis-Carmel metro area decelerated from 5.1 percent to 0.8 percent. The average manufacturing worker saw take-home wages shrink 0.7 percent in real terms. Overall, compensation data suggest a 2.2 percent real growth rate in the local economy. This is down from 6.6 percent over the same period last year and lags the 3 percent growth in real gross domestic product (GDP) posted by the U.S. economy as a whole.[1]

Previously established momentum in the Indianapolis region's income growth disappeared between 2006 and 2007. The city has returned to its traditional status of a lagging economic performer. The city lacks the critical mass of a high income industry required to make it competitive with other metropolitan areas across the nation.

Employment

Last year, employment in the Indianapolis-Carmel MSA shrank at an unprecedented rate. Between September 2006 and September 2007, total employment fell by 1.1 percent, as measured by the U.S. Bureau of Labor Statistics. This is a dramatic reversal of the 2.4 percent annual growth rate witnessed between September 2004 and September 2006. Indianapolis-Carmel metro employment has fallen only one other time since 1990. Jobs fell by 0.7 percent between September 1990 and September 1991 during the First Gulf War recession. Employment contraction in Indiana outpaced the Indianapolis region with a -1.6 percent rate between 2006 and 2007. Over the same period, employment nationwide grew by 1 percent. Construction, manufacturing, real estate, retail trade, and entertainment are industries that account for most of the employment contraction in the Indianapolis-Carmel MSA.

Ironically, local unemployment fell from 4.1 percent to 3.7 percent while the national rate increased from 4.4 percent to 4.5 percent. The unemployment rate fell even though the number of jobs shrank because of even larger shrinkage in the labor force. The labor force is the number of people of working age that have a job or seek a job. This number shrank by 1.5 percent between 2006 and 2007—a contraction that is also the largest for this variable since 1990. The state labor force shrank by an even bigger 2.1 percent. The national labor force grew by 1.2 percent.[2]

Higher relative rates of retirement and out-of-state migration best explain these shifts in the labor force. Shrinkage of the working population and the loss of skilled talent to jobs in other cities handicap long-term growth prospects for the Indianapolis area economy.

Real Estate

The Indianapolis-Carmel metro felt the nationwide retrenchment in real estate this past year. Over the last twelve months, the median price of homes fell 3.5 percent and the inventory of unsold homes rose 6.1 percent. Inventory peaked three months ago, signaling a possible recovery in the market that will be slow.[3]

Forecast

The Indianapolis region economy will inch forward in a lackluster way in 2008.

- A weak dollar will help local manufacturers export more products.
- The housing market will bottom out and begin to grow in tiny spurts.
- A local low cost-of-living will help attract outside businesses.
- Real growth in the local economy will be between 1 percent and 1.5 percent, a pace that will lag forecasted national growth of 2.5 percent.
- Consistent with its local "yo-yo" pattern, employment will reverse its downward trajectory and grow between 1.5 percent and 2 percent.

Unimpressive growth will keep the Indianapolis region economy afloat, but the Indianapolis-Carmel MSA will fall further behind other metropolitan areas because of its under-supply of college-educated workers.

Notes

1. Wage statistics come from the Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) database supplied by STATS Indiana. Nominal wages are converted to real wages using the Consumer Price Index values supplied by the Bureau of Labor Statistics. Data on U.S. GDP come from the Bureau of Economic Analysis.
2. Aggregate Indianapolis employment data are derived from labor force statistics supplied by STATS Indiana. Industry level insights come from the QCEW database.
3. Indianapolis housing market data sourced from www.housingtracker.net.

Kokomo

Kathy Parkison, Ph.D.
Professor of Economics, Director of the Center for Economic Education, Indiana University Kokomo

As noted in the forecasts for the international, national, and state economies, the recovery is okay (but not great), we expect growth to be okay (but not great), and employment numbers look okay (but certainly not great). However, the Kokomo economy, while improving, continues to lag behind the nation and state.

Kokomo's economy remains heavily weighted toward manufacturing. Employment in manufacturing industries peaked statewide in June 2000 and, while recent losses have been much less than before and some months have even posted gains, employment has still not regained anywhere close to its peak. The labor force is smaller than it was in 1997 (which can be a blessing—if it were the same size and employment had not increased, then the unemployment numbers would look even worse). **Figures 1** through **3** illustrate Kokomo's employment picture and are courtesy of the U.S. Department of Labor website.[1]

Therefore, like the rest of the state, individuals and firms in the area remain apprehensive about the economy and what it holds for them personally. This area remains heavily invested in industrial production and is very subject to economic disruptions with changes in industrial production. The really important news is that many of these job losses will be permanent due to increasing productivity, job losses to overseas, the troubles in the automobile industry, etc. This means that manufacturing production, while increasing somewhat, is unlikely to return to the glory days of the past. To put this in perspective, the Kokomo Metropolitan Statistical Area (MSA) has seen manufacturing and government jobs each decrease by 1.3 percent in the past twelve months. The only sector with increased employment was the trade, transportation, and utilities sector with a 1.4 percent increase. Overall employment figures dropped by 0.2 percent. The total number and percent of jobs are decreasing; the high-wage manufacturing jobs are really decreasing; and the growth areas of this economy are small (i.e., almost nonexistent) and may not pay as high of a wage as the manufacturing jobs.

As a result, even if job growth is occurring, it is not in the same high-paid industries that drove the Kokomo economy for so long. This has an impact on stores and restaurants as the buying habits of workers making $800 per week may not be equivalent to those earning $1,640 per week. Economic theory says that the lower paid workers may dine out less, buy less clothing (or buy clothing at less expensive stores), travel less, and buy less expensive electronics (all of those goods being what economic theory calls "normal goods"). So retailers, restaurateurs, and others need to be aware of these trends and plan accordingly.

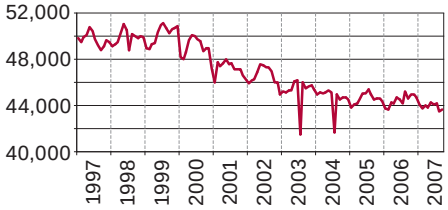
There are some bright spots—agriculture continues to perform reasonably well. The 10-31 land swaps[2] have put quite a few dollars into the local economies as land has changed hands, and $4 corn makes commodity farmers very happy (it doesn't make the livestock farmers nearly as happy). There are new businesses starting in the area, and Indiana, as noted in the state report, has had some success in attracting new large business operations to Indiana.

Overall, growth for the Kokomo economy is questionable. Trends in the automobile and other manufacturing industries will need to be watched carefully, and local authorities (of schools, government, etc.) will need to remain proactive on preparing their stakeholders for the future. In particular, students in K-12 will need to be reminded that their futures lie in industries very different from those of their parents and that they need to acquire the skills needed for their future.

Figure 1
Kokomo MSA Labor Force

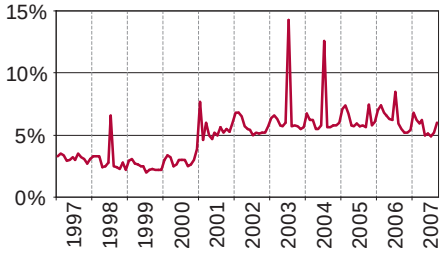
Source: Bureau of Labor Statistics

Figure 2
Kokomo MSA Employment



Source: Bureau of Labor Statistics

Figure 3
Kokomo MSA Unemployment Rate



Source: Bureau of Labor Statistics

Notes

1. Data are available at http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?series_id=LAUMT18290206&data_tool=percent22EaG percent22.
2. More technical information on like-kind property exchanges is available at www.irs.gov/businesses/small/industries/article/0,,id=98491,00.html.

Louisville

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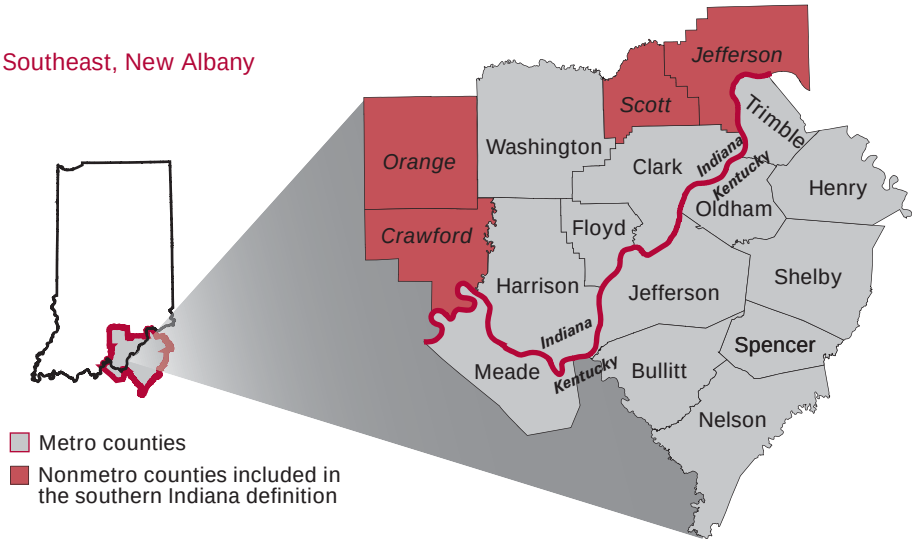
Southern Indiana and the Louisville metro maintained moderate growth during 2006 and through 2007. Recent employment data, however, point to slowdowns in some sectors. Slower growth was evident in the construction, retail, and financial activities sectors and near-term growth is likely to be affected by any further contraction in the housing sector. Health care, education, and the leisure sectors showed job gains consistent with recent movements in those sectors.

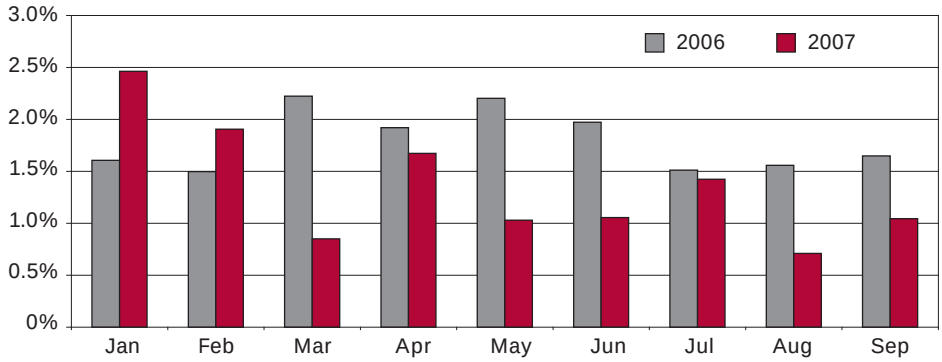


Louisville Metro

The Louisville metro jumped off to a good start in 2007 and generated employment gains higher than the previous year (see **Figure 1**). Since the first quarter, the metro economy continues to grow in total nonfarm payrolls but at a slower rate than recent years. This slower employment growth rate is likely the result of ongoing problems in the housing sector as the housing-related sectors of construction, financial activities, and retail saw declines or slower growth in payrolls. At the time of this writing, the most recent data point to resumed minor growth in construction, continued declines in retail, and significantly lower positive growth in financial activities (see **Figure 2**). The Louisville metro manufacturing sector saw gains from the previous year during the first quarter, but the third quarter saw continued losses in the manufacturing sector.

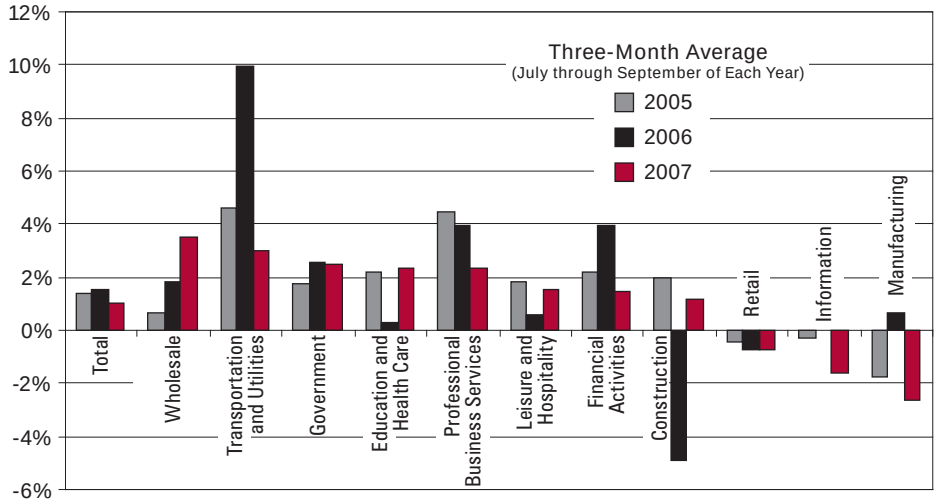
The Louisville metro also saw increases in employment in the education and health care sector, as well as in the leisure and hospitality sector. The professional and business services sector continues to increase employment, but at slower rates than in recent years. An indicator of a potential slowdown can be seen in

Figure 1
Louisville Metro Total Employment Change by Month



Source: Bureau of Labor Statistics

Figure 2
Louisville Metro Employment Change by Industry



Note: There was no change in employment in 2006 for the information sector
Source: Bureau of Labor Statistics

the transportation and utilities sector. Last year, transportation and utilities generated the largest increase in payrolls, but the latest change shows a noticeable slowing.

Southern Indiana

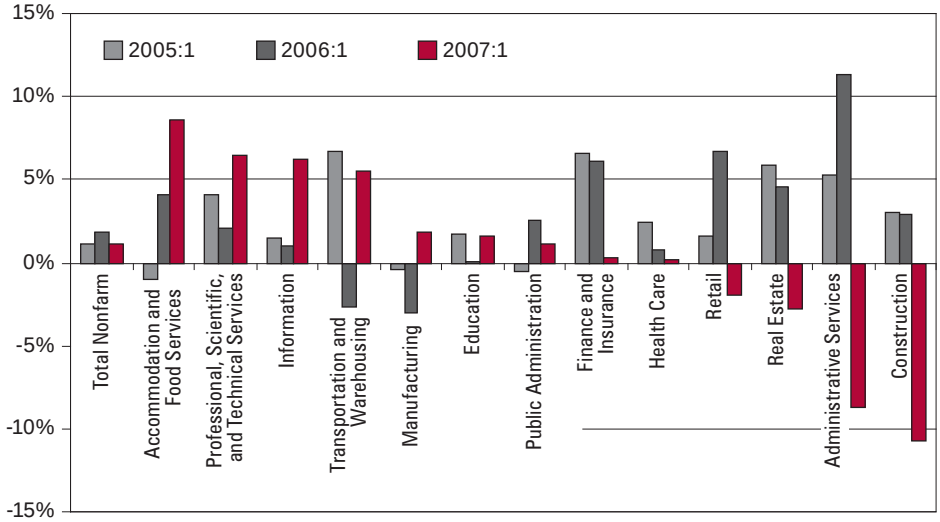
The most recently available data at the county level also show a deceleration of southern Indiana employment gains. The Quarterly Census of Employment and Wages (QCEW), available for the first quarter of 2007, indicate that southern Indiana metro counties continued the trend of overall job growth, but these gains are noticeably lower than the previous year (see **Figure 3**).

Housing sector challenges are also evident in southern Indiana metro counties. The construction sector saw declines in 2007 that almost equaled gains from the previous three years combined. Retail, the major driver of last year's job gains, actually saw declines in employment. Manufacturing showed impressive gains during the first quarter for the Indiana portion of the Louisville metro, but it is uncertain if these gains were sustained through 2007. Recent declines in manufacturing payrolls for the Louisville metro may be a preliminary signal for declines in Indiana as well.

Other housing-related sectors (finance and insurance and real estate and leasing) showed considerable declines for the first quarter of 2007. This was well in advance of this summer's credit crunch and contraction in mortgage lending, which may cause declines to continue into 2008.

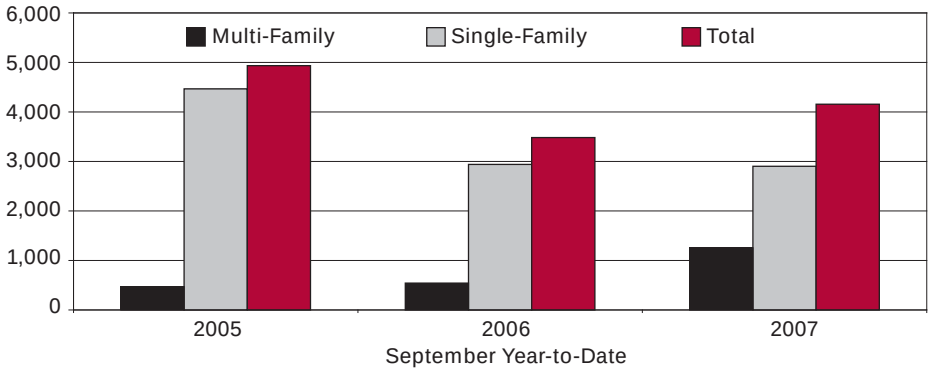
Educational services saw continued increases in employment, but health care saw its smallest increase in at least the past four years. Other service-providing sectors generated significant gains compared to first quarter 2006. Professional, scientific, and technical services, transportation and warehousing, and information all produced measurable gains. A downside on the service side was a large drop in administrative services employment. Given that a large component of administrative services consists of temporary labor, this drop may be another leading indicator of a slowing economy.

Figure 3
Percent Change in Employment for the Indiana Portion of the Louisville Metro



Source: STATS Indiana

Figure 4
Residential Building Permits*



*Includes Clark, Floyd, Harrison, and Washington counties in Indiana and Bullitt, Jefferson, and Oldham counties in Kentucky
Source: U.S. Census Bureau

Housing

Residential permits show an increase as of September 2007 (see **Figure 4**). An interesting development is the significant increase in multi-family permits. Continued building in the residential sector could contribute to some downside risks in housing. The additional building, combined with overall consumer credit tightening, may add to the supply of homes on the market, thus impacting overall property values. The potential of a softer labor market and higher adjustable mortgage payments in 2008 may represent the greatest threat to the local real estate market.

Labor Force Metrics

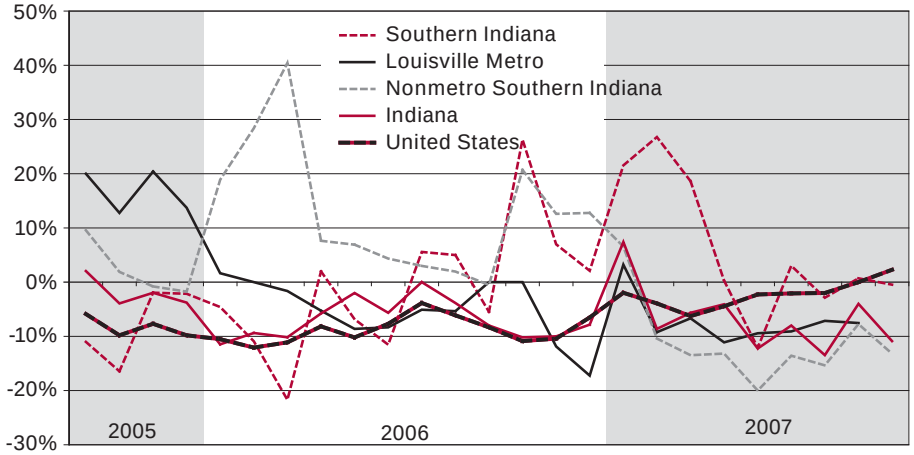
The southern Indiana metro counties observed higher unemployment rates during the first quarter of

2007, and rates for the second and third quarters have returned to levels similar to last year (see **Figure 5**). Even though third quarter unemployment rates are comparable to the third quarter of 2006, fewer people are employed in the four southern Indiana metropolitan counties. A troubling sign for the local economy's outlook is the size of the labor force and the number of people employed (see **Figure 6** and **Figure 7**). The number employed during the third quarter is approximately 2,700 fewer than the previous year's third quarter, and the labor force shows a similar decline. These two short-run movements in the data could suggest the possibility of discouraged workers and evidence of a pending slowdown.

2008 Outlook

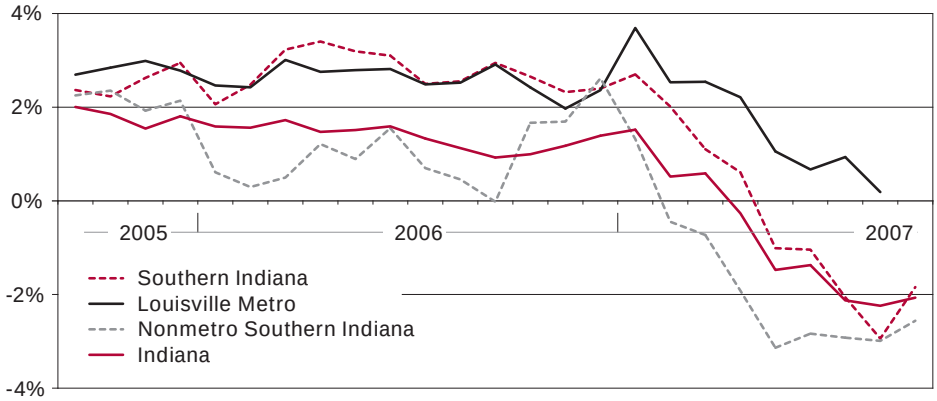
Growth in employment for 2008 will continue, but at a slower pace than in recent years. The slowdown in the housing sector will likely continue through 2008 and may place additional downside risks to local property values and the retail sector. Further declines in the value of the dollar and stronger global growth will support local manufacturing, or at least minimize the decline in employment levels. Local manufacturing growth may be counter-balanced by the possibility of a downturn in national consumer spending. A big concern is continuing developments in the housing sector and the impact on the consumer side of the economy. Energy and food prices will continue to exert pressures on consumer spending. As a result, personal income will be an important number to monitor. Overall, the outlook for the Louisville metro and southern Indiana is neutral to positive. The entire region, however, will see a lower rate of overall job growth.

Figure 5
Percent Change in Monthly Unemployment Rate* from Previous Year



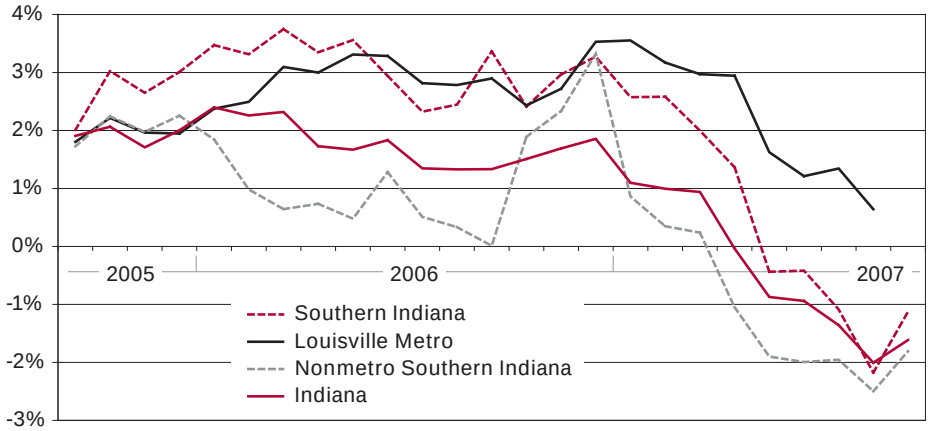
*Not seasonally adjusted
Source: Bureau of Labor Statistics

Figure 6
Percent Change in Labor Force from Previous Year



Source: Bureau of Labor Statistics

Figure 7
Percent Change in Employment from Previous Year



Source: Bureau of Labor Statistics

Muncie

Michael J. Hicks, Ph.D.
Director, Bureau of Business Research; Associate Professor of Economics, Ball State University, Muncie

Muncie's economy was rocked hard by the 2001 recession and the subsequent employment losses that swept the upper Midwest. Happily, it appears as if the employment declines and attendant out-migration have slowed considerably. As a result, we predict that 2008 will be a bottoming-out year for employment in Muncie. Here's what to expect.

First, as the rapid job losses plateau out, population declines—which have plagued the region over the past decade and a half—will dampen. Delaware County should see a population in 2010 just modestly above its 1990 Census of roughly 119,000. This estimate is consistent with some academic forecasters[1] who predict modest population growth for the area, and it is a significant turnaround from the 5,000 person drop in population between 1990 and 2000. A slowdown in economic out-migration, along with an increase in natural growth will aid in the region's population growth. Interestingly, net international migration is a small but growing contributor to the Muncie area population.

Employment loss in Delaware County has slowed to a trickle (see **Figure 1**). This trend largely mimics those counties adjoining Delaware County. The most recent data on net employment changes (job gains minus losses) suggest that 2006 to 2007 job losses hovered near zero for the second year in a row. The nearly static net employment changes mask a considerable turnover rate in employment. In the past four quarters, roughly one in ten jobs in the county went vacant and were later filled. This turbulence is a little less than the state or national average, but certainly reflects the state of employment dynamics in today's economy.

The health care and social services sector is one part of the economy that has changed dramatically. Growth has been almost sufficient enough to absorb modest job losses across the remaining sectors. The heaviest job losses have occurred in manufacturing and accommodations and food services. The impending closure of the Borg-Warner plant in Muncie (due by early 2009) will cost the area roughly 750 more manufacturing jobs. This is likely to be among the last of a long string of major plant closures in the region.

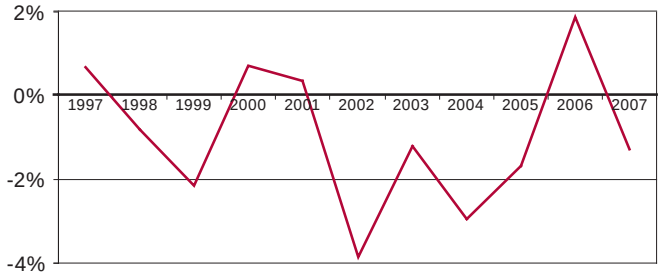
The sectoral shift away from more capital-intensive activities, such as manufacturing, to more labor-intensive industries, such as health care, is reflected in earnings data. Across the board, earnings for existing employees have declined modestly (by about one-third of a percent), while earnings for new hires have risen. This wage differential likely reflects the loss of jobs held by employees with longer job tenure (typically a manufacturing worker). The new hires occur in sectors with increasing human capital demands (hence higher starting wages than in years past).

Health care sector growth, including the recent announcement for Clarian Healthcare in Delaware County, will likely extend the trend of switching from capital-intensive to labor-intensive industries far beyond 2008.

Finally, Delaware County residents have made great strides in educational attainment. Nothing else in the region will be as influential in the coming years as a ready pool of educated and healthy workers for prospective businesses. The percent of adults who graduated high school rose, as did the percent of adults who graduated college. In fact, Delaware County is above the state and national average in both metrics. Most importantly, however, is the direction of recent high school graduates. In 1996, fewer than 70 percent of Delaware County high school students reported plans for college at graduation. That rate rose 20 percentage points by 2006; now, nearly nine out of ten Delaware County high school graduates have college plans.

The Muncie area, like most other mid-sized cities in the upper Midwest, has been buffeted by hard economic times over the past two decades. The large-scale job losses appear to have largely run their course and the face of the new economy is emerging. The coming year will bring more news confirming this transformation. The educational attainment and industry trends should be viewed as heartening news for the region.

Figure 1
Percent Change in Total Employment from Previous September in Delaware County



Source: Bureau of Labor Statistics

Note

1. Derived from Peter Linneman and Albert Saiz, "Forecasting 2020 U.S. County and MSA Populations" (working paper 572, Samuel Zell and Robert Lurie Real Estate Center at Wharton, Wharton University of Pennsylvania).

Richmond

Carol O. Rogers
Deputy Director, Indiana Business Research Center, Kelley School of Business, Indiana University

Slow growth is the most likely forecast for the coming year in Wayne County—but note the word growth is used here. This area has been hit hard by job declines in manufacturing in recent years and its population has also declined.

Looking at recent trends in quarterly employment, there are encouraging increases occurring in more sectors than not. The health care and social services sector is contributing more jobs and higher wages to the community, likely due to the significant changes with Reid Hospital and the likely growth of business services contributing to that regional health care facility. Construction has also benefited, with a 16.7 percent increase in the number of jobs between 2006 and 2007 and 13.3 percent increase in wages for that sector.

Manufacturing continues to shed jobs in the area, but at a slower rate. For those working in manufacturing, wages continue to increase and this industry continues to pay the highest weekly wage in the area (see **Table 1**).

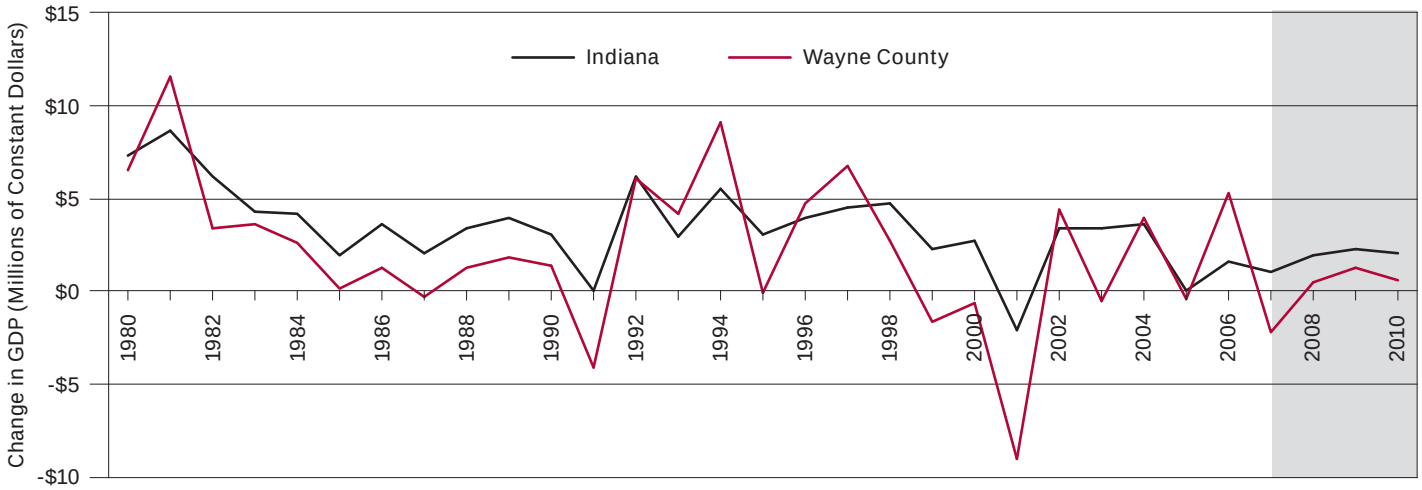
Overall economic productivity is forecasted to climb out of the negative and into positive territory by 2009 (see **Figure 1**). But as the economy of Richmond and Wayne County continues to strengthen in the services sectors, such as health and business, it is likely that employment opportunities will also increase in other lower performing sectors.

Table 1
Covered Employment and Wages for Wayne County, 2007:1

Industry	Jobs	Percent Change Since 2006:1	Average Weekly Wage	Percent Change Since 2006:1
Totals	32,715	-1.1	$628	5.0
Growth in Jobs and Wages				
Health Care and Social Services	5,023	1.0	$713	16.1
Retail Trade	3,975	0.3	$398	1.8
Accommodation and Food Services	2,813	1.8	$209	-0.9
Wholesale Trade	921	2.7	$771	-3.0
Construction	852	16.7	$709	13.3
Professional, Scientific, and Technical Services	407	0.7	$557	0.7
Decline in Jobs But Increase in Wages				
Manufacturing	7,112	-1.7	$786	3.4
Transportation and Warehousing	1,041	-8.2	$724	7.1
Finance and Insurance	937	-0.2	$732	0.3
Information	508	-1.2	$572	4.2
Decline in Both Jobs and Wages				
Educational Services	3,307	-0.5	$550	-1.4
Arts, Entertainment, and Recreation	141	-0.7	$241	-5.5

Source: IBRC, based on ES-202 data

Figure 1
Change in Gross Domestic Product for Indiana and Wayne County, Estimates and Forecast



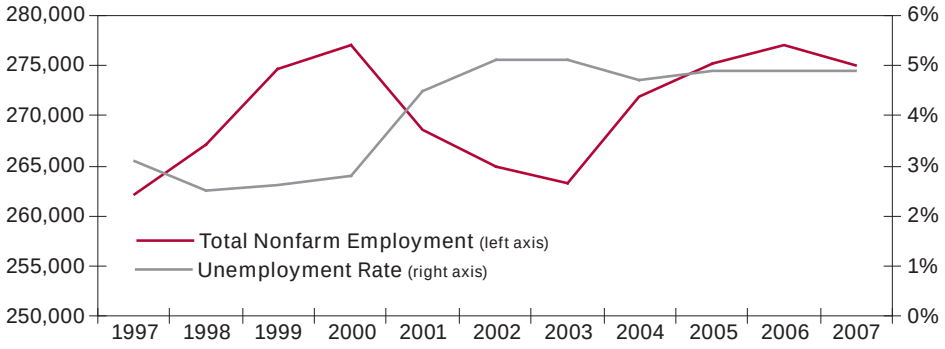
Source: IBRC, using Bureau of Labor Statistics, Bureau of Economic Analysis, and Economy.com data

South Bend–Mishawaka and Elkhart-Goshen

Grant C. Black
Director, Bureau of Business and Economic Research; Assistant Professor of Economics, School of Business and Economics, Indiana University South Bend

The economic slowdown experienced across the United States also plagued north-central Indiana. The metropolitan areas of South Bend–Mishawaka (St. Joseph County, Indiana, and Cass County, Michigan) and Elkhart-Goshen (Elkhart County, Indiana) faced a sluggish economy in 2007. The year started slowly and remained slow-moving until an upturn in the third quarter. While uncertainties about the local economy persist, the outlook for 2008 looks marginally better than the past year as the national economy gains momentum.

Figure 1
Total Nonfarm Employment and Unemployment Rate in the Michiana Region,* 1997 to 2007



*Michiana includes St. Joseph and Elkhart counties in Indiana and Cass County in Michigan
Source: Bureau of Labor Statistics

Employment

Figure 1 shows the overall slowdown in the region's employment growth. Annual unemployment rates in the region have remained steady since 2005. Unemployment rates dropped significantly in the first half of 2007, rose during the early summer, but turned downward again beginning in August. Continuing the trend that began in 2006, the unemployment rate in the South Bend–Mishawaka metro exceeded the national and state averages, while the unemployment rate in the Elkhart-Goshen metro remained below the national and state averages through much of the past year. In 2007, for the first time since 2003, total nonfarm employment fell from the previous year, signaling weakening labor demand and slower economic activity in the region.

Table 1 reports employment data by industry for the region's metropolitan areas. Approximately 280,000 people are employed in nonfarm sectors across the region, with employment being about 16,000 people higher in the South Bend–Mishawaka metro. From September 2006 to September 2007, total nonfarm employment decreased by less than 0.1 percent, with a loss of 800 jobs in the Elkhart-Goshen metro and a gain of 300 jobs in the South Bend–Mishawaka metro.

Manufacturing employment fell by 1,300 jobs due in part to a sluggish RV market in the Elkhart-Goshen metro, where 1,500 manufacturing jobs were lost. Manufacturing employment will likely remain uncertain in the year ahead as the RV market stays flat and local producers and suppliers continue to feel the side effects from the domestic auto industry's downturn.

Non-manufacturing employment saw more positive changes. Sectors gaining the most jobs were trade,

Table 1
Employment by Industry, September 2007

Industry	South Bend–Mishawaka Metro		Elkhart-Goshen Metro		Combined	
	Employment	Change Since September 2006	Employment	Change Since September 2006	Employment	Change Since September 2006
Total Nonfarm	148,000	300	132,000	-800	280,000	-500
Manufacturing	20,900	200	62,100	-1,500	83,000	-1,300
Trade, Transportation, and Utilities	29,000	500	19,200	100	48,200	600
Educational and Health Services	32,800	200	11,100	-100	43,900	100
Government	17,600	-300	9,700	0	27,300	-300
Professional and Business Services	13,200	-200	9,300	300	22,500	100
Leisure and Hospitality	12,600	0	7,800	300	20,400	300
Natural Resources, Mining, and Construction	6,700	0	4,900	100	11,600	100
Financial Services	7,400	0	3,200	0	10,600	0
Other Services	5,600	-100	3,900	0	9,500	-100
Information	2,200	0	800	0	3,000	0

Source: Bureau of Labor Statistics

transportation, and utilities in the South Bend–Mishawaka metro, professional and business services in the Elkhart-Goshen metro, leisure and hospitality in Elkhart-Goshen, and educational and health services in South Bend–Mishawaka. Sizeable job losses occurred in manufacturing and government across the region. Government and professional and business services lost jobs in the South Bend–Mishawaka metro, while manufacturing and education and health services suffered losses in the Elkhart-Goshen metro. Many services—including financial services—remained stagnant in 2007, likely due to the sluggish national economy and struggling financial markets. Employment in services and trade will likely improve in 2008 as interest rates fall, spending improves, and financial markets stabilize.

Wages

The average weekly wage rose only 1.7 percent from the first quarter of 2006 to the first quarter of 2007 in St. Joseph and Elkhart counties. This marked a slowdown from the previous year that saw wages rise more than 6 percent in St. Joseph County and more than 10 percent in Elkhart County due to inflationary pressures. Wage growth varied by industry. Manufacturing wages fell 0.1 percent. Wages rose 5 percent in transportation and warehousing and finance and insurance, 4.2 percent in retail, and 2.6 percent in health care and social services. Expected slower inflation in 2008 will continue the slow growth in wages over the coming year.

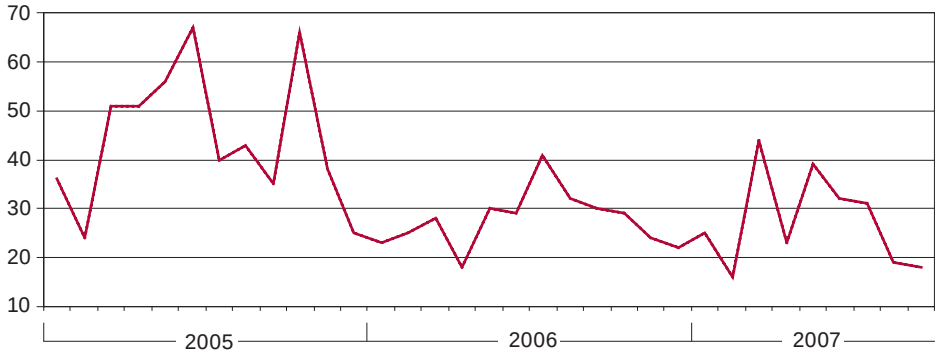
Housing

Residential construction, measured by the number of new single-dwelling housing permits issued in St. Joseph County, remained soft in 2007 as in 2006. From January 2007 to September 2007, 247 new housing permits were issued, compared to 256 during the same period in 2006 (see **Figure 2**). That is in stark contrast to the 403 permits issued during the same period in 2005. The continued slowdown in new housing indicates the Michiana market has continued to struggle with weak demand, falling housing prices, growing inventories of existing homes, and tougher credit markets. As financial markets stabilize and interest rates improve, 2008 should see improvement in local real estate markets.

Summary

In 2007, the Michiana region's economy was sluggish: flat employment, relatively stable unemployment rates, rising wages, and continued slow real estate markets. The outlook for 2008 shows signs of modest improvement, with the region seeing expanded production in some manufacturing and non-manufacturing sectors, higher employment, slowing growth in wages, and more active real estate markets.

Figure 2
Single-Family Residential Building Permits in St. Joseph County, 2005 to 2007



Source: St. Joseph County Building Department

Terre Haute

Carol O. Rogers
Deputy Director, Indiana Business Research Center, Kelley School of Business, Indiana University

The Terre Haute economy, when measured by its gross domestic product (GDP) in terms of sheer dollar volume, has grown from $3.5 billion to $5 billion from 1987 to 2007.[1]

At the same time, personal income earned and accrued by residents of the Terre Haute metro area has grown far more significantly, from $2 billion in 1987 to $5 billion in 2007. This is a telling convergence with GDP and likely due to losses in manufacturing jobs and resulting increases in commuting to and from jobs in bordering Illinois. These jobs have been on the upswing since the early 2000s.

GDP and personal income for the region are forecast to grow, albeit slowly, for the next several years. Personal income is expected to overtake GDP and grow to approximately $7.2 billion by 2017 (see **Figure 1**).

Personal income, however, continues to lag that of the state and Indiana continues to lag the nation, as seen in **Figure 2**. However, it is more important to know the context of personal income—that is, where does it come from? In the case of Terre Haute, the majority of personal income comes from the sweat of its residents' brows—or in economic terms, from earnings generated by residents within the metro area or those who work outside the area and bring the money back into the metro (see **Figure 3**).

Terre Haute's work earnings, for commuters to and residents of the area, totaled a whopping $3.1 billion for 2005 (the latest year of real data available). Total personal income in the metro area totaled $4.4 billion once accommodations were made for residence and other income based on social security payments to seniors

and the disabled; unemployment checks and welfare payments; as well as interest, dividends, and rent accrued to those with stocks, portfolios, and rental properties. Both figures tell an economic story—the metro is a job hub and a residential hub for the larger region as a whole.

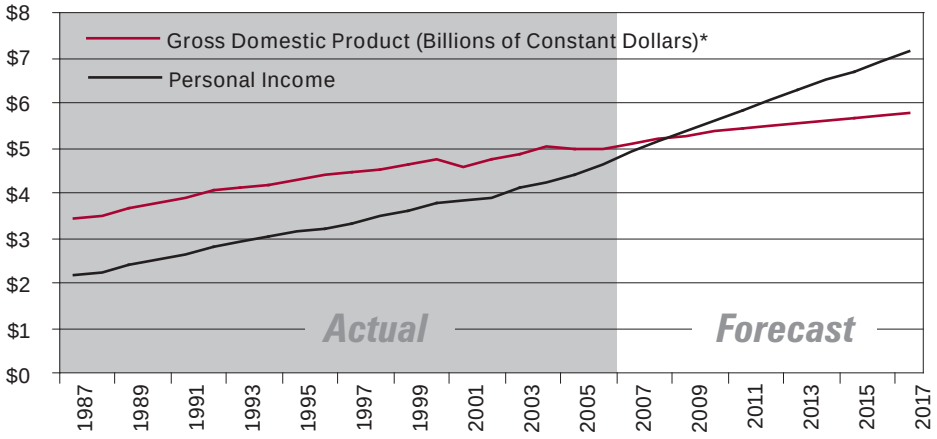
While one might hope for a stronger forecast, the signs suggest the Terre Haute economy will "hold its own." More aggressive economic development plans seem to be underway for the area, particularly in Vigo County, and residential growth in the surrounding counties remains strong. Reliance on high paying manufacturing jobs is being replaced by enthusiasm for other industries, including business services and firms involved directly or indirectly in the life sciences. This region has strong and sustainable assets, with universities in the area engaging ever more in economic and strategic development.

Note

1. These are constant dollars, meaning they take inflation into account.

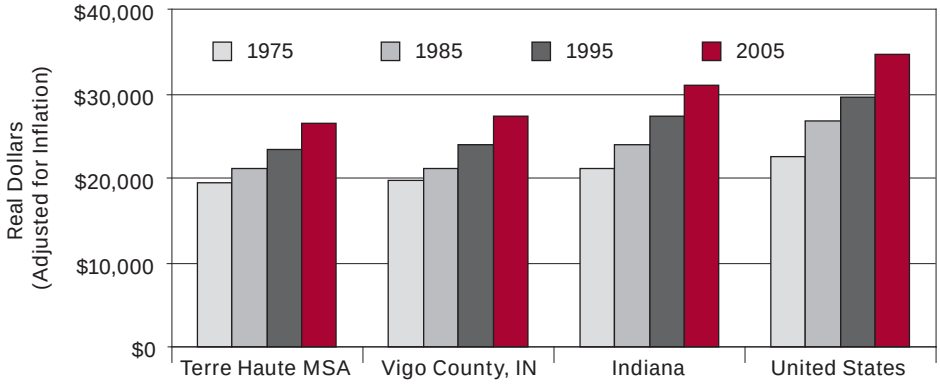
Gross Metropolitan Product
Such a quantifier for metropolitan areas or counties is relatively new and also subject to problems. Consider that the United States has borders, and for goods to cross them, there is paperwork to help quantify those goods and services. This is not the case with states and metros, so economists use detailed income and earnings by industry data from the Bureau of Economic Analysis (BEA) to help produce a scale to measure what an area's economic output is on an annual basis. The numbers used in this article were provided by Economy.com, but are based on the BEA data. More information is available at the BEA website (www.bea.gov).

Figure 1
Comparison of GDP and Personal Income in the Terre Haute MSA, 1987 to 2017



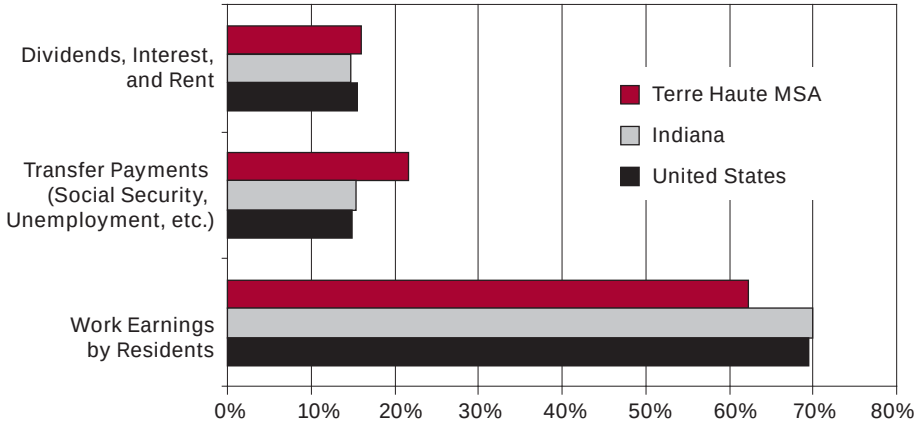
*Seasonally adjusted annual rate
Source: IBRC, using Bureau of Economic Analysis and Economy.com data

Figure 2
Per Capita Personal Income



Source: Economy.com, using Bureau of Economic Analysis data

Figure 3
Per Capita Personal Income in the Terre Haute MSA, 2005



Source: STATS Indiana, using Bureau of Economic Analysis 2005 data

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Retail Trivia

United States		Indiana
9,355	Number of department stores. Indiana has 2.5 percent of all department stores in the United States.	234
789 million	Square feet of selling space at department stores. Indiana equals 2.2 percent of the U.S. total.	18 million
$278	Sales per square foot of selling space at department stores.	$260
$225	Conventional department stores* sell less per square foot than all department stores combined.	$198
$467	For convenience stores, Indiana has higher sales per square foot than the nation.	$490

*Conventional department stores do not include discount department stores
All data are from the U.S. Census Bureau's Economic Census

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